

# Inventn Search

TRAN 09/905,676

=> d his

(FILE 'HOME' ENTERED AT 14:26:52 ON 19 NOV 2002)

FILE 'HCAPLUS' ENTERED AT 14:27:01 ON 19 NOV 2002

L1 37 S EDE N?/AU  
L2 15 S ERCOLE F?/AU  
L3 16 S PHAM Y?/AU  
L4 35 S TRIBBICK G?/AU  
L5 4 S SANDANAYAKE S?/AU  
SELECT RN L\*\*\* 1-3  
L6 157 S PERERA S?/AU  
L7 253 S L1-6  
L8 13 S L7 AND GRAFT?  
L9 7 S L7 AND ?POLYMER?(4A)GRAFT?  
L10 7 S L8 AND L9  
L11 ~~2 S L10 AND MODULAR?~~ 2 cites  
SELECT RN L11 1-2

FILE 'REGISTRY' ENTERED AT 14:39:47 ON 19 NOV 2002

L12 32 S E33-64 32 cpds from 41 cites

FILE 'HCAPLUS' ENTERED AT 14:40:15 ON 19 NOV 2002

L13 1 S L11 AND L12

~~L14 2 S L13 OR L11~~ 2 cites w/ 32 cpds displayed

selecting out relevant cpds from  
L11 cites

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ACCESSION NUMBER:      2002:562392  HCAPLUS
DOCUMENT NUMBER:       137:306783
TITLE:                 Multiple parallel synthesis of peptides on SynPhase
                       grafted supports
AUTHOR(S):            Ede, Nicholas J.
CORPORATE SOURCE:      Mimotopes Pty Ltd., Clayton, 3168, Australia
SOURCE:               Journal of Immunological Methods (2002), 267(1), 3-11
                       CODEN: JIMMBG; ISSN: 0022-1759
PUBLISHER:            Elsevier Science B.V.
DOCUMENT TYPE:         Journal; General Review
LANGUAGE:              English

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AB A review. The Multipin peptide synthesis approach originated as an immunol. tool for epitope mapping. However, continuing evolution of the basic technol. has permitted the synthesis of peptides at scales up to 25 .mu.mol per **modular grafted** surface. At this loading, the methodol. can no longer be considered just a screening tool and is now used for the synthesis of micromoles of peptide and other small drug-like mols. for high throughput compd. screening. Recent developments such as the introduction of novel **grafted polymeric** surfaces, new linkers, as well as novel cleavage formats has extended the scope of applications for **modular grafted** surfaces. This review summarizes the important achievements over the last 15 yr of applications of the Multipin synthesis approach and also introduces a new **modular grafted** surface for peptide and small mol. synthesis called the SynPhase Lantern.

CC 9-0 (Biochemical Methods)

ST review parallel synthesis peptide SynPhase **grafted** support

IT Epitopes

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(mapping; multiple parallel synthesis of peptides on SynPhase
grafted supports)
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IT High throughput screening

(multiple parallel synthesis of peptides on SynPhase **grafted** supports)

IT Peptides, preparation

RL: BPN (Biosynthetic preparation); BIOL (Biological study); PREP (Preparation)

(multiple parallel synthesis of peptides on SynPhase **grafted** supports)

REFERENCE COUNT: 46 THERE ARE 46 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

=&gt; d ibib abs hitstr ind 2

L14 ANSWER 2 OF 2 HCAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 2002:72193 HCAPLUS

DOCUMENT NUMBER: 136:115066

TITLE: Novel activated **modular grafted**  
**polymeric** surfaces for solid phase chemistry  
applicationsINVENTOR(S): Ede, Nicholas Jon; Ercole, Francesca  
; Pham, Yen; Tribbick, Gordon;  
Sandanayake, Saman; Perera, Senake

PATENT ASSIGNEE(S): Mimotopes Pty. Ltd., Australia

SOURCE: PCT Int. Appl., 44 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

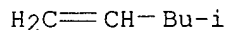
LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

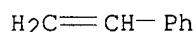
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002006384	A1	20020124	WO 2001-AU850	20010713
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
US 2002076835	A1	20020620	US 2001-905676	20010713
PRIORITY APPLN. INFO.:				
			US 2000-218236P	P 20000714
			US 2001-282099P	P 20010406
AB The present invention relates generally to new surfaces for solid phase chem. applications, more specifically plastics surfaces modified by <b>graft polymn.</b> for use in chem. synthesis and/or immobilization of chem. entities and/or compds. In particular the invention relates to an activated <b>modular grafted</b> <b>polymeric</b> surface, which is suitable for use as a reagent for solid phase org. synthesis, or as a reagent for the affinity capture, presentation or prepn. of biomols. such as proteins, oligonucleotides, nucleic acids, peptides, and lectins. The <b>grafted</b> <b>polymeric</b> surfaces of the invention are particularly useful as scavenger reagents in combinatorial synthetic protocols, and as affinity reagents in protein purifn. and proteomics. Diagrams describing the app. are given.				
IT <b>177408-87-6DP</b> , Styrene-TXP <b>graft copolymer</b> , functionalized RL: CPS (Chemical process); IMF (Industrial manufacture); PEP (Physical, engineering or chemical process); TEM (Technical or engineered material use); PREP (Preparation); PROC (Process); USES (Uses) (activated <b>modular</b> surface modified; novel activated <b>modular grafted polymeric</b> surfaces for solid phase chem. applications)				
RN	177408-87-6 HCAPLUS			
CN	Benzene, ethenyl-, polymer with 4-methyl-1-pentene, graft (9CI) (CA INDEX NAME)			

CM 1

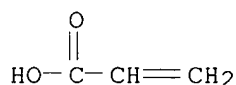
CRN 691-37-2  
CMF C6 H12

CM 2

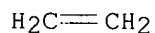
CRN 100-42-5  
CMF C8 H8

IT 98846-22-1DP, Acrylic acid-ethylene **graft copolymer**, nickel chelated 106281-06-5DP, Acrylic acid-ethylene-propylene **graft copolymer**, nickel chelated 113723-21-0DP, Acrylic acid-TPX **graft copolymer**, nickel chelated  
 RL: CPS (Chemical process); IMF (Industrial manufacture); PEP (Physical, engineering or chemical process); TEM (Technical or engineered material use); PREP (Preparation); PROC (Process); USES (Uses) (activated **modular** surface; novel activated **modular grafted polymeric** surfaces for solid phase chem. applications)  
 RN 98846-22-1 HCAPLUS  
 CN 2-Propenoic acid, polymer with ethene, graft (9CI) (CA INDEX NAME)

CM 1

CRN 79-10-7  
CMF C3 H4 O2

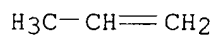
CM 2

CRN 74-85-1  
CMF C2 H4

RN 106281-06-5 HCAPLUS  
 CN 2-Propenoic acid, polymer with ethene and 1-propene, graft (9CI) (CA INDEX NAME)

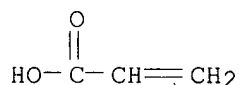
CM 1

CRN 115-07-1  
CMF C3 H6



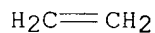
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CMF C3 H4 O2



CM 3

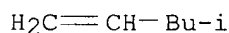
CRN 74-85-1  
CMF C2 H4



RN 113723-21-0 HCAPLUS  
CN 2-Propenoic acid, polymer with 4-methyl-1-pentene, graft (9CI) (CA INDEX NAME)

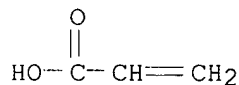
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CRN 691-37-2  
CMF C6 H12



CM 2

CRN 79-10-7  
CMF C3 H4 O2

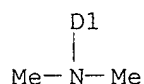
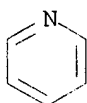


IT 9003-99-0P, Peroxidase  
RL: CPS (Chemical process); PEP (Physical, engineering or chemical process); PRP (Properties); PUR (Purification or recovery); PREP (Preparation); PROC (Process)  
(horseradish; novel activated **modular grafted polymeric** surfaces for solid phase chem. applications)

RN 9003-99-0 HCAPLUS  
 CN Peroxidase (9CI) (CA INDEX NAME)

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

IT 57951-36-7DP, Dimethylaminopyridine, reaction products with activated **modular grafted polymeric** surface  
 RL: CAT (Catalyst use); CPS (Chemical process); IMF (Industrial manufacture); PEP (Physical, engineering or chemical process); TEM (Technical or engineered material use); PREP (Preparation); PROC (Process); USES (Uses)  
 (novel activated **modular grafted polymeric** surfaces for solid phase chem. applications)  
 RN 57951-36-7 HCAPLUS  
 CN Pyridinamine, N,N-dimethyl- (9CI) (CA INDEX NAME)

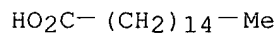


IT 57-10-3DP, Palmitic acid, reaction products with aminomethylated styrene **graft copolymer 98-59-9DP**, Tosyl chloride, reaction products with activated **modular grafted polymeric** surface **98-83-9DP**, .alpha.-Methylstyrene, **polymers** with styrene **graft copolymer 100-42-5DP**, Styrene, **graft copolymer 100-52-7DP**, Benzaldehyde, reaction products with activated **modular grafted polymeric** surface **110-91-8DP**, Morpholine, reaction products with **graft copolymer 115-10-6DP**, Dimethyl ether, reaction products with **grafted polymeric** surface **118-29-6DP**, N-Hydroxymethylphthalimide, reaction products with styrene **graft copolymer 302-01-2DP**, Hydrazine, reaction products with styrene **graft copolymer 603-35-0DP**, Triphenylphosphine, reaction products with activated **modular grafted polymeric** surface **609-65-4DP**, 2-Chlorobenzoyl chloride, reaction products with styrene **graft copolymer 814-68-6DP**, Acryloyl chloride, reaction products with **graft copolymer 1079-66-9DP**, Chlorodiphenylphosphine, reaction products with lithiated styrene **graft copolymer 2094-99-7DP**, **polymers** with styrene **graft copolymer 7440-02-0DP**, Nickel, chelating metal with activated **modular grafted polymeric** surface **7440-70-2DP**, Calcium, chelating metal with activated **modular grafted polymeric** surface **7790-94-5DP**, Chlorosulfonic acid, reaction products with styrene **graft copolymer 32315-10-9DP**, Triphosgene, reaction products with aminomethylated styrene **graft copolymer**  
 RL: CPS (Chemical process); IMF (Industrial manufacture); PEP (Physical, engineering or chemical process); TEM (Technical or engineered material

use); PREP (Preparation); PROC (Process); USES (Uses)  
 (novel activated **modular grafted polymeric**  
 surfaces for solid phase chem. applications)

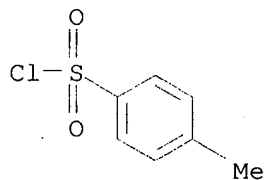
RN 57-10-3 HCAPLUS

CN Hexadecanoic acid (9CI) (CA INDEX NAME)



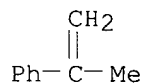
RN 98-59-9 HCAPLUS

CN Benzenesulfonyl chloride, 4-methyl- (9CI) (CA INDEX NAME)



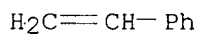
RN 98-83-9 HCAPLUS

CN Benzene, (1-methylethenyl)- (9CI) (CA INDEX NAME)



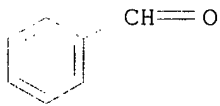
RN 100-42-5 HCAPLUS

CN Benzene, ethenyl- (9CI) (CA INDEX NAME)



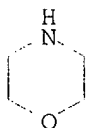
RN 100-52-7 HCAPLUS

CN Benzaldehyde (7CI, 8CI, 9CI) (CA INDEX NAME)



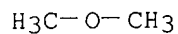
RN 110-91-8 HCAPLUS

CN Morpholine (8CI, 9CI) (CA INDEX NAME)

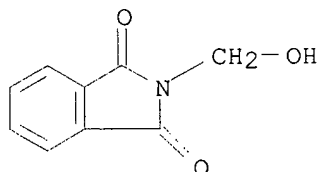




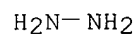
RN 115-10-6 HCAPLUS  
CN Methane, oxybis- (9CI) (CA INDEX NAME)



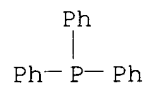
RN 118-29-6 HCAPLUS  
CN 1H-Isoindole-1,3(2H)-dione, 2-(hydroxymethyl)- (9CI) (CA INDEX NAME)



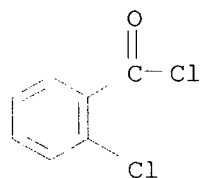
RN 302-01-2 HCAPLUS  
CN Hydrazine (7CI, 8CI, 9CI) (CA INDEX NAME)



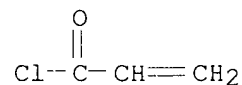
RN 603-35-0 HCAPLUS  
CN Phosphine, triphenyl- (7CI, 8CI, 9CI) (CA INDEX NAME)



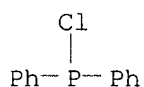
RN 609-65-4 HCAPLUS  
CN Benzoyl chloride, 2-chloro- (9CI) (CA INDEX NAME)



RN 814-68-6 HCAPLUS  
CN 2-Propenoyl chloride (9CI) (CA INDEX NAME)

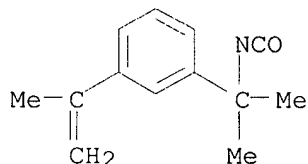


RN 1079-66-9 HCAPLUS  
CN Phosphinous chloride, diphenyl- (6CI, 8CI, 9CI) (CA INDEX NAME)



RN 2094-99-7 HCAPLUS

CN Benzene, 1-(1-isocyanato-1-methylethyl)-3-(1-methylethenyl)- (9CI) (CA INDEX NAME)



RN 7440-02-0 HCAPLUS

CN Nickel (8CI, 9CI) (CA INDEX NAME)

Ni

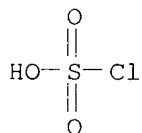
RN 7440-70-2 HCAPLUS

CN Calcium (8CI, 9CI) (CA INDEX NAME)

Ca

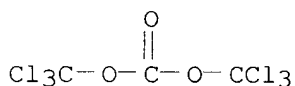
RN 7790-94-5 HCAPLUS

CN Chlorosulfuric acid (8CI, 9CI) (CA INDEX NAME)



RN 32315-10-9 HCAPLUS

CN Methanol, trichloro-, carbonate (2:1) (9CI) (CA INDEX NAME)



IT 9013-20-1P, Streptavidin 11028-71-0P, Concanavalin A

RL: CPS (Chemical process); PEP (Physical, engineering or chemical process); PRP (Properties); PUR (Purification or recovery); PREP (Preparation); PROC (Process)  
(novel activated **modular grafted polymeric** surfaces for solid phase chem. applications)

RN 9013-20-1 HCAPLUS

CN Streptavidin (8CI, 9CI) (CA INDEX NAME)

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

RN 11028-71-0 HCAPLUS

CN Concanavalin A (8CI, 9CI) (CA INDEX NAME)

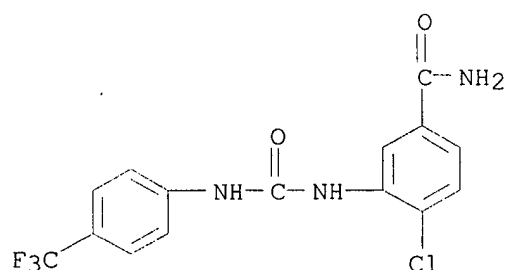
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IT 327026-05-1P

RL: IMF (Industrial manufacture); PREP (Preparation)  
(novel activated **modular grafted polymeric**  
surfaces for solid phase chem. applications)

RN 327026-05-1 HCAPLUS

CN Benzamide, 4-chloro-3-[[[4-(trifluoromethyl)phenyl]amino]carbonyl]amino]-  
(9CI) (CA INDEX NAME)



IT 100-63-0, Phenylhydrazine

RL: REM (Removal or disposal); PROC (Process)  
(novel activated **modular grafted polymeric**  
surfaces for solid phase chem. applications)

RN 100-63-0 HCAPLUS

CN Hydrazine, phenyl- (8CI, 9CI) (CA INDEX NAME)

H<sub>2</sub>N-NH-Ph

IT 50-00-0P, Formaldehyde, preparation

RL: CPS (Chemical process); IMF (Industrial manufacture); PEP (Physical,  
engineering or chemical process); TEM (Technical or engineered material  
use); PREP (Preparation); PROC (Process); USES (Uses)  
(resins; activated **modular** surface; novel activated  
**modular grafted polymeric** surfaces for  
solid phase chem. applications)

RN 50-00-0 HCAPLUS

CN Formaldehyde (8CI, 9CI) (CA INDEX NAME)

H<sub>2</sub>C=O

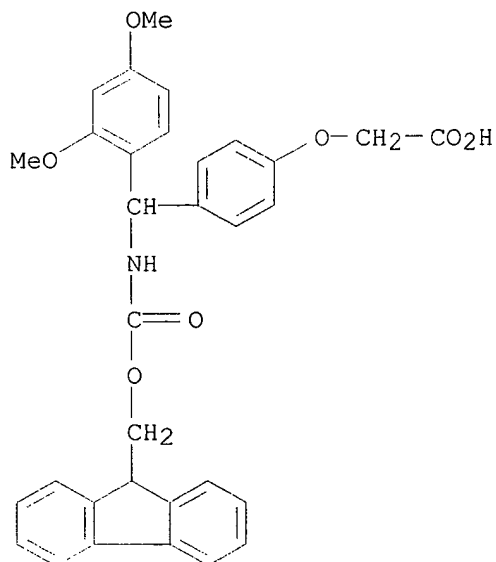
IT 126828-35-1

RL: RCT (Reactant); RACT (Reactant or reagent)  
(solid phase rink amide linker; novel activated **modular**  
**grafted polymeric** surfaces for solid phase chem.  
applications)

RN 126828-35-1 HCAPLUS

CN Acetic acid, [4-[(2,4-dimethoxyphenyl)[(9H-fluoren-9-

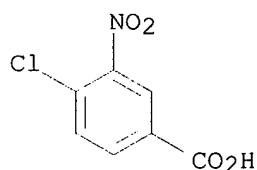
ylmethoxy)carbonyl]amino]methyl]phenoxy]- (9CI) (CA INDEX NAME)



IT 96-99-1, 4-Chloro-3-nitrobenzoic acid 1548-13-6,  
4-Trifluoromethylphenyl isocyanate  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(solid phase synthesis; novel activated **modular**  
**grafted polymeric** surfaces for solid phase chem.  
applications)

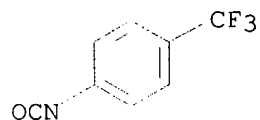
RN 96-99-1 HCAPLUS

CN Benzoic acid, 4-chloro-3-nitro- (7CI, 8CI, 9CI) (CA INDEX NAME)



RN 1548-13-6 HCAPLUS

CN Benzene, 1-isocyanato-4-(trifluoromethyl)- (9CI) (CA INDEX NAME)



IC ICM C08J007-12

ICS C08J007-14; C08J007-16; C08J007-18; G01N033-545; C07K017-08;  
C07K001-22

CC 9-1 (Biochemical Methods)

Section cross-reference(s): 38

ST app polymer immobilization biomol protein purifn sample prepn

IT Epoxy resins, preparation

Natural rubber, preparation  
 Polyamides, preparation  
 Polycarbonates, preparation  
 Polyethers, preparation  
 Polyoxymethylenes, preparation  
 Polysiloxanes, preparation  
 Polyurethanes, preparation  
 RL: CPS (Chemical process); IMF (Industrial manufacture); PEP (Physical, engineering or chemical process); TEM (Technical or engineered material use); PREP (Preparation); PROC (Process); USES (Uses)  
 (activated **modular** surface; novel activated **modular grafted polymeric** surfaces for solid phase chem. applications)

IT Immunoassay  
 (enzyme-linked immunosorbent assay; novel activated **modular grafted polymeric** surfaces for solid phase chem. applications)

IT Polyesters, preparation  
 Polyolefins  
 Synthetic rubber, preparation  
 RL: CPS (Chemical process); IMF (Industrial manufacture); PEP (Physical, engineering or chemical process); TEM (Technical or engineered material use); PREP (Preparation); PROC (Process); USES (Uses)  
 (**graft**, activated **modular** surface; novel activated **modular grafted polymeric** surfaces for solid phase chem. applications)

IT Polymerization  
 (**graft**, ozone; novel activated **modular grafted polymeric** surfaces for solid phase chem. applications)

IT Polymerization  
 (**graft**, photochem.; novel activated **modular grafted polymeric** surfaces for solid phase chem. applications)

IT Polymerization  
 (**graft**, plasma; novel activated **modular grafted polymeric** surfaces for solid phase chem. applications)

IT Polymerization  
 (**graft**, radiochem.; novel activated **modular grafted polymeric** surfaces for solid phase chem. applications)

IT Proteins  
 RL: PRP (Properties); PUR (Purification or recovery); PREP (Preparation)  
 (mitochondrial; novel activated **modular grafted polymeric** surfaces for solid phase chem. applications)

IT Calcium-binding proteins  
 Glycoproteins  
 RL: PUR (Purification or recovery); PREP (Preparation)  
 (mitochondrial; novel activated **modular grafted polymeric** surfaces for solid phase chem. applications)

IT Catalysts  
 Genetic methods  
 Immobilization, molecular  
 Oxidizing agents  
 Reducing agents  
 Sample preparation  
 (novel activated **modular grafted polymeric** surfaces for solid phase chem. applications)

IT Proteome

- RL: BSU (Biological study, unclassified); BIOL (Biological study)  
 (novel activated **modular grafted polymeric**  
 surfaces for solid phase chem. applications)
- IT Agglutinins and Lectins  
 Carbohydrates, properties  
 Enzymes, properties  
 Nucleic acids  
 Oligonucleotides  
 Peptides, properties  
 RL: CPS (Chemical process); PEP (Physical, engineering or chemical  
 process); PRP (Properties); PROC (Process)  
 (novel activated **modular grafted polymeric**  
 surfaces for solid phase chem. applications)
- IT Proteins  
 RL: CPS (Chemical process); PEP (Physical, engineering or chemical  
 process); PRP (Properties); PUR (Purification or recovery); PREP  
 (Preparation); PROC (Process)  
 (novel activated **modular grafted polymeric**  
 surfaces for solid phase chem. applications)
- IT Lipids, properties  
 RL: PRP (Properties)  
 (novel activated **modular grafted polymeric**  
 surfaces for solid phase chem. applications)
- IT Proteins  
 RL: CPS (Chemical process); PEP (Physical, engineering or chemical  
 process); PRP (Properties); PROC (Process)  
 (recombinant; novel activated **modular grafted**  
**polymeric** surfaces for solid phase chem. applications)
- IT Chelates  
 RL: CPS (Chemical process); IMF (Industrial manufacture); PEP (Physical,  
 engineering or chemical process); TEM (Technical or engineered material  
 use); PREP (Preparation); PROC (Process); USES (Uses)  
 (with **modular grafted polymeric** surface;  
 novel activated **modular grafted polymeric**  
 surfaces for solid phase chem. applications)
- IT 177408-87-6DP, Styrene-TXP **graft copolymer**,  
 functionalized  
 RL: CPS (Chemical process); IMF (Industrial manufacture); PEP (Physical,  
 engineering or chemical process); TEM (Technical or engineered material  
 use); PREP (Preparation); PROC (Process); USES (Uses)  
 (activated **modular** surface modified; novel activated  
**modular grafted polymeric** surfaces for  
 solid phase chem. applications)
- IT 98846-22-1DP, Acrylic acid-ethylene **graft**  
**copolymer**, nickel chelated 106281-06-5DP, Acrylic  
 acid-ethylene-propylene **graft copolymer**, nickel  
 chelated 113723-21-0DP, Acrylic acid-TPX **graft**  
**copolymer**, nickel chelated  
 RL: CPS (Chemical process); IMF (Industrial manufacture); PEP (Physical,  
 engineering or chemical process); TEM (Technical or engineered material  
 use); PREP (Preparation); PROC (Process); USES (Uses)  
 (activated **modular** surface; novel activated **modular**  
**grafted polymeric** surfaces for solid phase chem.  
 applications)
- IT 9003-99-0P, Peroxidase  
 RL: CPS (Chemical process); PEP (Physical, engineering or chemical  
 process); PRP (Properties); PUR (Purification or recovery); PREP  
 (Preparation); PROC (Process)  
 (horseradish; novel activated **modular grafted**  
**polymeric** surfaces for solid phase chem. applications)

- IT 57951-36-7DP, Dimethylaminopyridine, reaction products with activated **modular grafted polymeric** surface  
 RL: CAT (Catalyst use); CPS (Chemical process); IMF (Industrial manufacture); PEP (Physical, engineering or chemical process); TEM (Technical or engineered material use); PREP (Preparation); PROC (Process); USES (Uses)  
 (novel activated **modular grafted polymeric** surfaces for solid phase chem. applications)
- IT 57-10-3DP, Palmitic acid, reaction products with aminomethylated styrene **graft copolymer** 98-59-9DP, Tosyl chloride, reaction products with activated **modular grafted polymeric** surface 98-83-9DP, .alpha.-Methylstyrene, **polymers** with styrene **graft copolymer** 100-42-5DP, Styrene, **graft copolymer** 100-52-7DP, Benzaldehyde, reaction products with activated **modular grafted polymeric** surface 110-91-8DP, Morpholine, reaction products with **graft copolymer** 115-10-6DP, Dimethyl ether, reaction products with **grafted polymeric** surface 118-29-6DP, N-Hydroxymethylphthalimide, reaction products with styrene **graft copolymer** 302-01-2DP, Hydrazine, reaction products with styrene **graft copolymer** 603-35-0DP, Triphenylphosphine, reaction products with activated **modular grafted polymeric** surface 609-65-4DP, 2-Chlorobenzoyl chloride, reaction products with styrene **graft copolymer** 814-68-6DP, Acryloyl chloride, reaction products with **graft copolymer** 1079-66-9DP, Chlorodiphenylphosphine, reaction products with lithiated styrene **graft copolymer** 2094-99-7DP, **polymers** with styrene **graft copolymer** 7440-02-0DP, Nickel, chelating metal with activated **modular grafted polymeric** surface 7440-70-2DP, Calcium, chelating metal with activated **modular grafted polymeric** surface 7790-94-5DP, Chlorosulfonic acid, reaction products with styrene **graft copolymer** 32315-10-9DP, Triphosgene, reaction products with aminomethylated styrene **graft copolymer**  
 RL: CPS (Chemical process); IMF (Industrial manufacture); PEP (Physical, engineering or chemical process); TEM (Technical or engineered material use); PREP (Preparation); PROC (Process); USES (Uses)  
 (novel activated **modular grafted polymeric** surfaces for solid phase chem. applications)
- IT 9013-20-1P, Streptavidin 11028-71-0P, Concanavalin A  
 RL: CPS (Chemical process); PEP (Physical, engineering or chemical process); PRP (Properties); PUR (Purification or recovery); PREP (Preparation); PROC (Process)  
 (novel activated **modular grafted polymeric** surfaces for solid phase chem. applications)
- IT 327026-05-1P  
 RL: IMF (Industrial manufacture); PREP (Preparation)  
 (novel activated **modular grafted polymeric** surfaces for solid phase chem. applications)
- IT 100-63-0, Phenylhydrazine  
 RL: REM (Removal or disposal); PROC (Process)  
 (novel activated **modular grafted polymeric** surfaces for solid phase chem. applications)
- IT 50-00-0P, Formaldehyde, preparation  
 RL: CPS (Chemical process); IMF (Industrial manufacture); PEP (Physical, engineering or chemical process); TEM (Technical or engineered material

use); PREP (Preparation); PROC (Process); USES (Uses)  
(resins; activated **modular** surface; novel activated  
**modular grafted polymeric** surfaces for  
solid phase chem. applications)

IT 126828-35-1

RL: RCT (Reactant); RACT (Reactant or reagent)  
(solid phase rink amide linker; novel activated **modular**  
**grafted polymeric** surfaces for solid phase chem.  
applications)

IT 96-99-1, 4-Chloro-3-nitrobenzoic acid 1548-13-6,  
4-Trifluoromethylphenyl isocyanate

RL: RCT (Reactant); RACT (Reactant or reagent)  
(solid phase synthesis; novel activated **modular**  
**grafted polymeric** surfaces for solid phase chem.  
applications)

REFERENCE COUNT:

17

THERE ARE 17 CITED REFERENCES AVAILABLE FOR THIS  
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT



Entire search  
history

TRAN 09/905,676

=> d his

(FILE 'HOME' ENTERED AT 16:56:53 ON 19 NOV 2002)

FILE 'ZCAPLUS' ENTERED AT 16:57:09 ON 19 NOV 2002

E CROSSLINK/CT  
E CROSSLINK/CT  
E CROSSLINKING+CT/CT  
E CROSSLINKING+ALL/CT  
E GRAFT/CT  
E GRAFTED/CT  
E GRAFTING+ALL/CT  
E MODULAR/CT  
E SOLID SUPPORT/CT  
E SOLID PHASE/CT

CT = controlled terminology  
(indexing)

Each of the highlighted  
L-numbers has a query  
display in the  
thicker document so  
that you can see the  
steps / logic progression

FILE 'HCAPLUS' ENTERED AT 17:01:09 ON 19 NOV 2002

L1 47758 S CROSSLINKING/CT  
L2 148740 S POLYMERIZATION/CT  
L3 10866 S MODULAR  
L4 98617 S GRAFT?  
L5 7647 S SOLID SUPPORT  
L6 0 S L3 AND L4 AND L5  
L7 107 S L4 AND L5

~~L8 7 S L7 AND L1-2~~

FILE 'REGISTRY' ENTERED AT 17:04:50 ON 19 NOV 2002

L9 155060 S PVIN/PCT ← all polyolefins  
L10 1 S 691-37-2 ← 4-methyl pentene  
L11 349 S 691-37-2/CRN ← all polymers w/ 4-methyl pentene as a

FILE 'HCAPLUS' ENTERED AT 17:07:02 ON 19 NOV 2002

L12 393389 S L9 ← polyolefins  
L13 1147 S L10 - 4 me pentene  
L14 4530 S L11 - polymers w/ component

~~L15 4 S L8 AND L12-14~~

L16 19067 S L2(L) (?CHEMICAL? OR OZONE OR O3 OR .GAMMA.RADIATION OR UV OR  
L17 4 S L16 AND L3  
L18 2873 S L16 AND L4  
L19 14 S L16 AND L5  
L20 3244 S L16 AND L12-14  
L21 28975 S ELECTROPHIL?  
L22 112474 S ?ISOCYANAT? OR TOSYL CHLORIDE  
L23 546 S LANTERN  
L24 10890 S GEAR  
L25 1 S L22 AND L3 AND L4 ← appl. priority doc.  
L26 18 S L22 AND L3  
L27 2679 S L22 AND L4  
L28 106 S L22 AND L5  
L29 30 S L23-24 AND L3  
L30 54 S L23-24 AND L4  
L31 4 S L23-24 AND L5  
L32 31 S L26-28 AND L16  
L33 0 S L29-31 AND L16  
L34 7 S L29-31 AND L1-2  
L35 0 S L17-20 AND L29-31  
L36 31 S L17-20 AND L32-34

~~L37 18 S L15 OR L17~~

L38 26 S L3 AND L4  
L39 5763 S L4 (5A) SURFACE

~~L40~~ ~~2 S L39 AND L19~~  
 L41 12 S L19 NOT L40  
 L42 0 S L41 AND GEAR  
 L43 0 S L41 AND LANTERN  
~~L44~~ ~~11 S L13 OR L34~~  
 L45 114 S L13-14 AND L15-44  
 L46 17 S L45 AND L3-5  
~~L47~~ ~~7 S L12 AND L46~~  
 L48 28 S L8 OR L37 OR L44 OR L47 OR L40  
 L49 28 S L48 OR L15  
 L50 107 S L45 NOT L49  
 L51 11 S L50 AND GEAR  
 L52 0 S L50 AND LANTERN  
 L53 0 S L50 AND LANTERN  
 L54 114 S GEAR(3A) (NI OR NICKEL)  
 L55 0 S L54 AND L50  
 L56 0 S L54 AND GRAFT?  
 L57 41 S GEAR(P) (CHELAT? OR COORDINAT?)  
 L58 0 S L57 AND L50  
 L59 48 S GEAR AND (CHELAT? OR COORDINAT?)  
 L60 0 S L59 AND L50  
 L61 863 S GEAR AND (NI OR ?NICKEL?)  
 L62 0 S L61 AND L3  
~~L63~~ ~~2 S L57 OR L59 OR L61 AND L1-5~~  
 L64 5 S L1-5 AND LANTERN  
~~L65~~ ~~7 S L64 NOT ASIALOGLYCOPROTEIN-LABELED/II~~  
 L66 121 S L21(5A) L22  
 L67 0 S L66 AND GRAFT?  
 L68 82 S L21 AND L4  
 L69 54 S L68 AND POLYMER?  
 L70 0 S L69 AND MODULAR?  
 L71 14 S (L5 OR L39) AND L68  
 L72 0 S (L5 OR L39) AND L66  
 L73 347 S (L5 OR L39) AND (L21-22)  
 L74 14 S L73 AND L68  
~~L75~~ ~~2 S L74 AND L12 L4~~

FILE 'STNGUIDE' ENTERED AT 17:53:13 ON 19 NOV 2002

FILE 'HCAPLUS' ENTERED AT 17:56:01 ON 19 NOV 2002

~~L76~~ ~~33 S L8 OR L15 OR L37 OR L40 OR L44 OR L47 OR L63 OR L65 OR L75~~

33  
 cites  
 total

# Query display & display of citations

TRAN 09/905,676

=> file hcaplus

FILE HCAPLUS ENTERED AT 17:56:01 ON 19 NOV 2002  
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.  
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.  
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FILE COVERS 1907 - 19 Nov 2002 VOL 137 ISS 21  
FILE LAST UPDATED: 18 Nov 2002 (20021118/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

CAS roles have been modified effective December 16, 2001. Please check your SDI profiles to see if they need to be revised. For information on CAS roles, enter HELP ROLES at an arrow prompt or use the CAS Roles thesaurus (/RL field) in this file.

*the following are the  
query displays for  
relevant  
answer sets*

=> d que 18

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L2	148740	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	POLYMERIZATION/CT
L4	98617	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	GRAFT?
L5	7647	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	SOLID SUPPORT
L7	107	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	L4 AND L5
L8	7	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	L7 AND (L1 OR L2)

*7 cites*

=> d que 115

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L5	7647	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	SOLID SUPPORT
L7	107	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	L4 AND L5
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L10	1	SEA	FILE=REGISTRY	ABB=ON	PLU=ON	691-37-2
L11	349	SEA	FILE=REGISTRY	ABB=ON	PLU=ON	691-37-2/CRN
L12	393389	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	L9
L13	1147	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	L10
L14	4530	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	L11
L15	4	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	L8 AND (L12 OR L13 OR L14)

*14 cites*

=> d que 137

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L3	10866	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	MODULAR

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 L16 19067 SEA FILE=HCAPLUS ABB=ON PLU=ON L2(L) (?CHEMICAL? OR OZONE OR  
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 L17 4 SEA FILE=HCAPLUS ABB=ON PLU=ON L16 AND L3  
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=&gt; d. que 140

L2 148740 SEA FILE=HCAPLUS ABB=ON PLU=ON POLYMERIZATION/CT  
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 L19 14 SEA FILE=HCAPLUS ABB=ON PLU=ON L16 AND L5  
 L39 5763 SEA FILE=HCAPLUS ABB=ON PLU=ON L4 (5A) SURFACE  
~~L40 2 SEA FILE=HCAPLUS ABB=ON PLU=ON L39 AND L19~~ 2 cites

=&gt; d. que 144

L1 47758 SEA FILE=HCAPLUS ABB=ON PLU=ON CROSSLINKING/CT  
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 L3 10866 SEA FILE=HCAPLUS ABB=ON PLU=ON MODULAR  
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 L5 7647 SEA FILE=HCAPLUS ABB=ON PLU=ON SOLID SUPPORT  
 L23 546 SEA FILE=HCAPLUS ABB=ON PLU=ON LANTERN  
 L24 10890 SEA FILE=HCAPLUS ABB=ON PLU=ON GEAR  
 L29 30 SEA FILE=HCAPLUS ABB=ON PLU=ON (L23 OR L24) AND L3  
 L30 54 SEA FILE=HCAPLUS ABB=ON PLU=ON (L23 OR L24) AND L4  
 L31 4 SEA FILE=HCAPLUS ABB=ON PLU=ON (L23 OR L24) AND L5  
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 L27 2679 SEA FILE=HCAPLUS ABB=ON PLU=ON L22 AND L4  
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 L37 8 SEA FILE=HCAPLUS ABB=ON PLU=ON L15 OR L17  
 L38 26 SEA FILE=HCAPLUS ABB=ON PLU=ON L3 AND L4  
 L39 5763 SEA FILE=HCAPLUS ABB=ON PLU=ON L4 (5A) SURFACE  
 L40 2 SEA FILE=HCAPLUS ABB=ON PLU=ON L39 AND L19  
 L41 12 SEA FILE=HCAPLUS ABB=ON PLU=ON L19 NOT L40  
 L42 0 SEA FILE=HCAPLUS ABB=ON PLU=ON L41 AND GEAR  
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 L44 11 SEA FILE=HCAPLUS ABB=ON PLU=ON L31 OR L34  
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7 cites

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L1 47758 SEA FILE=HCAPLUS ABB=ON PLU=ON CROSSLINKING/CT  
 L2 148740 SEA FILE=HCAPLUS ABB=ON PLU=ON POLYMERIZATION/CT  
 L3 10866 SEA FILE=HCAPLUS ABB=ON PLU=ON MODULAR  
 L4 98617 SEA FILE=HCAPLUS ABB=ON PLU=ON GRAFT?  
 L5 7647 SEA FILE=HCAPLUS ABB=ON PLU=ON SOLID SUPPORT  
 L57 41 SEA FILE=HCAPLUS ABB=ON PLU=ON GEAR(P) (CHELAT? OR COORDINAT?)  
 L59 48 SEA FILE=HCAPLUS ABB=ON PLU=ON GEAR AND (CHELAT? OR COORDINAT  
 ?)  
 L61 863 SEA FILE=HCAPLUS ABB=ON PLU=ON GEAR AND (NI OR ?NICKEL?)

~~L63 2 SEA FILE=HCAPLUS ABB=ON PLU=ON L57 OR L59 OR L61) AND (L1 OR L2 OR L3 OR L4 OR L5)~~

2 cites

=&gt; a que L65

L1 47758 SEA FILE=HCAPLUS ABB=ON PLU=ON CROSSLINKING/CT  
 L2 148740 SEA FILE=HCAPLUS ABB=ON PLU=ON POLYMERIZATION/CT  
 L3 10866 SEA FILE=HCAPLUS ABB=ON PLU=ON MODULAR  
 L4 98617 SEA FILE=HCAPLUS ABB=ON PLU=ON GRAFT?  
 L5 7647 SEA FILE=HCAPLUS ABB=ON PLU=ON SOLID SUPPORT  
 L64 5 SEA FILE=HCAPLUS ABB=ON PLU=ON (L1 OR L2 OR L3 OR L4 OR L5)  
 AND LANTERN

~~L65 4 SEA FILE=HCAPLUS ABB=ON PLU=ON L64 NOT ASIALOGLYCOPROTEIN-LA~~  
~~VEILED/AM~~

4 cites

=&gt; a que L75

L4 98617 SEA FILE=HCAPLUS ABB=ON PLU=ON GRAFT?  
 L5 7647 SEA FILE=HCAPLUS ABB=ON PLU=ON SOLID SUPPORT  
 L9 155060 SEA FILE=REGISTRY ABB=ON PLU=ON PVIN/PCT  
 L10 1 SEA FILE=REGISTRY ABB=ON PLU=ON 691-37-2  
 L11 349 SEA FILE=REGISTRY ABB=ON PLU=ON 691-37-2/CRN  
 L12 393389 SEA FILE=HCAPLUS ABB=ON PLU=ON L9  
 L13 1147 SEA FILE=HCAPLUS ABB=ON PLU=ON L10  
 L14 4530 SEA FILE=HCAPLUS ABB=ON PLU=ON L11  
 L21 28975 SEA FILE=HCAPLUS ABB=ON PLU=ON ELECTROPHIL?  
 L22 112474 SEA FILE=HCAPLUS ABB=ON PLU=ON ?ISOCYANAT? OR TOSYL  
 CHLORIDE  
 L39 5763 SEA FILE=HCAPLUS ABB=ON PLU=ON L4 (5A) SURFACE  
 L68 82 SEA FILE=HCAPLUS ABB=ON PLU=ON L21 AND L4  
 L73 347 SEA FILE=HCAPLUS ABB=ON PLU=ON (L5 OR L39) AND ((L21 OR  
 L22))  
 L74 14 SEA FILE=HCAPLUS ABB=ON PLU=ON L73 AND L68

~~L75 2 SEA FILE=HCAPLUS ABB=ON PLU=ON L74 AND (L12 OR L13 OR L14)~~ 2 cites

=> s 18 or 115 or 137 or 140 or 144 or 147 or 163 or 165 or 175 all the answer sets

33 cite ~~L76 33 L8 OR L15 OR L37 OR L40 OR L44 OR L47 OR L63 OR L65 OR L75~~ are

=&gt; a que L76 1533

L76 ANSWER 1 OF 33 HCAPLUS COPYRIGHT 2002 ACS  
 ACCESSION NUMBER: 2002:562392 HCAPLUS  
 DOCUMENT NUMBER: 137:306783  
 TITLE: Multiple parallel synthesis of peptides on SynPhase  
 grafted supports  
 AUTHOR(S): Ede, Nicholas J.  
 CORPORATE SOURCE: Mimotopes Pty Ltd., Clayton, 3168, Australia  
 SOURCE: Journal of Immunological Methods (2002), 267(1), 3-11  
 CODEN: JIMMBG; ISSN: 0022-1759  
 PUBLISHER: Elsevier Science B.V.  
 DOCUMENT TYPE: Journal; General Review  
 LANGUAGE: English

AB A review. The Multipin peptide synthesis approach originated as an immunol. tool for epitope mapping. However, continuing evolution of the basic technol. has permitted the synthesis of peptides at scales up to 25 .mu.mol per modular grafted surface. At this loading,

to get rid  
of duplicate

the methodol. can no longer be considered just a screening tool and is now used for the synthesis of micromoles of peptide and other small drug-like mols. for high throughput compd. screening. Recent developments such as the introduction of novel **grafted** polymeric surfaces, new linkers, as well as novel cleavage formats has extended the scope of applications for **modular grafted** surfaces. This review summarizes the important achievements over the last 15 yr of applications of the Multipin synthesis approach and also introduces a new **modular grafted** surface for peptide and small mol. synthesis called the SynPhase **Lantern**.

REFERENCE COUNT: 46 THERE ARE 46 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L76 ANSWER 2 OF 33 HCAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 2002:72193 HCAPLUS

DOCUMENT NUMBER: 136:115066

TITLE: Novel activated **modular grafted** polymeric **surfaces** for solid phase chemistry applications

INVENTOR(S): Ede, Nicholas Jon; Ercole, Francesca; Pham, Yen; Tribbick, Gordon; Sandanayake, Saman; Perera, Senake

PATENT ASSIGNEE(S): Mimotopes Pty. Ltd., Australia

SOURCE: PCT Int. Appl., 44 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002006384	A1	20020124	WO 2001-AU850	20010713
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
RW:	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG			
US 2002076835	A1	20020620	US 2001-905676	20010713
PRIORITY APPLN. INFO.:			US 2000-218236P	P 20000714
			US 2001-282099P	P 20010406

AB The present invention relates generally to new surfaces for solid phase chem. applications, more specifically plastics **surfaces** modified by **graft** polymn. for use in chem. synthesis and/or immobilization of chem. entities and/or compds. In particular the invention relates to an activated **modular grafted** polymeric **surface**, which is suitable for use as a reagent for solid phase org. synthesis, or as a reagent for the affinity capture, presentation or prepn. of biomols. such as proteins, oligonucleotides, nucleic acids, peptides, and lectins. The **grafted** polymeric **surfaces** of the invention are particularly useful as scavenger reagents in combinatorial synthetic protocols, and as affinity reagents in protein purifn. and proteomics. Diagrams describing the app. are given.

IT 177408-87-6DP, Styrene-TXP **graft** copolymer, functionalized

RL: CPS (Chemical process); IMF (Industrial manufacture); PEP (Physical, engineering or chemical process); TEM (Technical or engineered material

use); PREP (Preparation); PROC (Process); USES (Uses)  
 (activated **modular surface** modified; novel  
 activated **modular grafted** polymeric  
**surfaces** for solid phase chem. applications)

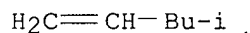
RN 177408-87-6 HCAPLUS

CN Benzene, ethenyl-, polymer with 4-methyl-1-pentene, graft (9CI) (CA INDEX NAME)

CM 1

CRN 691-37-2

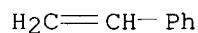
CMF C6 H12



CM 2

CRN 100-42-5

CMF C8 H8



IT 113723-21-0DP, Acrylic acid-TPX **graft** copolymer, nickel  
 chelated

RL: CPS (Chemical process); IMF (Industrial manufacture); PEP (Physical,  
 engineering or chemical process); TEM (Technical or engineered material  
 use); PREP (Preparation); PROC (Process); USES (Uses)  
 (activated **modular surface**; novel activated  
**modular grafted** polymeric **surfaces** for  
 solid phase chem. applications)

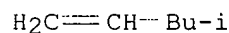
RN 113723-21-0 HCAPLUS

CN 2-Propenoic acid, polymer with 4-methyl-1-pentene, graft (9CI) (CA INDEX NAME)

CM 1

CRN 691-37-2

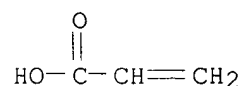
CMF C6 H12



CM 2

CRN 79-10-7

CMF C3 H4 O2





REFERENCE COUNT: 17 THERE ARE 17 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L76 ANSWER 3 OF 33 HCAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 2001:774422 HCAPLUS

DOCUMENT NUMBER: 135:318866

TITLE: Radiation-grafted solid supports for chemical synthesis

INVENTOR(S): Zhao, Chanfeng; Lillig, John E.; Neeper, Robert; Hudson, Gordon W.; Czarnik, Anthony W.; Parandoosh, Zahra; David, Gary S.; Xiao, Xiao-yi

PATENT ASSIGNEE(S): Irori, USA

SOURCE: U.S., 27 pp., Cont.-in-part of U.S. Ser. No. 958,254.

CODEN: USXXAM

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 20

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 6306975	B1	20011023	US 1998-10951	19980122
US 6329139	B1	20011211	US 1997-912998	19970811
US 6136274	A	20001024	US 1997-958254	19971007
PRIORITY APPLN. INFO.:			US 1997-788594	B2 19970122
			US 1997-857800	A2 19970122
			US 1997-826253	A2 19970327
			US 1997-912998	A2 19970811
			US 1997-958254	A2 19971007
			US 1995-473660	A2 19950607
			US 1995-480147	A2 19950607
			US 1995-480196	A2 19950607
			US 1995-484486	A2 19950607
			US 1995-484504	A2 19950607
			US 1995-538387	A2 19951003
			US 1995-567746	A2 19951205
			US 1996-639813	B2 19960402
			WO 1996-US6145	A2 19960425
			US 1996-633410	A2 19960610
			US 1996-669252	A2 19960624
			US 1996-711426	A2 19960905
			US 1996-709435	A2 19960906
			US 1996-723423	A2 19960930
			WO 1996-US15999	A2 19961003
			US 1996-726703	B2 19961007
			US 1996-743984	A2 19961028
			US 1996-741685	B2 19961031

AB A solid support for use in chem. synthesis comprises:  
a graft polymer radiation grafted onto a surface of a fluoropolymer, wherein the fluoropolymer comprises a material that is resistant to temps. present during chem. synthesis and wherein the radiation grafting is effected in a soln. of the graft polymer, methanol and an acid. Methods for increasing the performance of solid phase assays, such as scintillation proximity assays, are also provided. PTFE was grafted with styrene.

IT 109211-02-1DP, Styrene-tetrafluoroethylene graft copolymer, reaction products with N-(hydroxymethyl) phthalimide 197895-58-2P, Ethylene-styrene-tetrafluoroethylene graft copolymer

RL: IMF (Industrial manufacture); TEM (Technical or engineered material)

use); PREP (Preparation); USES (Uses)  
 (radiation-grafted solid supports for  
 chem. synthesis)

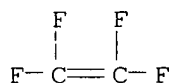
RN 109211-02-1 HCAPLUS

CN Benzene, ethenyl-, polymer with tetrafluoroethene, graft (9CI) (CA INDEX NAME)

CM 1

CRN 116-14-3

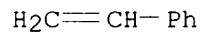
CMF C2 F4



CM 2

CRN 100-42-5

CMF C8 H8



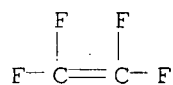
RN 197895-58-2 HCAPLUS

CN Benzene, ethenyl-, polymer with ethene and tetrafluoroethene, graft (9CI)  
 (CA INDEX NAME)

CM 1

CRN 116-14-3

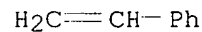
CMF C2 F4



CM 2

CRN 100-42-5

CMF C8 H8



CM 3

CRN 74-85-1

CMF C2 H4

H<sub>2</sub>C=CH<sub>2</sub>

REFERENCE COUNT: 19 THERE ARE 19 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L76 ANSWER 4 OF 33 HCAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 2001:732016 HCAPLUS

DOCUMENT NUMBER: 136:102353

TITLE: Solid-phase traceless synthesis of selected nitrogen-containing heterocyclic compounds. The encore technique for directed sorting of **modular solid support**

AUTHOR(S): Krchnak, Viktor; Smith, Jennifer; Vagner, Josef

CORPORATE SOURCE: SIDDCO, Inc., Tucson, AZ, 85747, USA

SOURCE: Collection of Czechoslovak Chemical Communications (2001), 66(7), 1078-1106  
CODEN: CCCCCA; ISSN: 0010-0765

PUBLISHER: Institute of Organic Chemistry and Biochemistry, Academy of Sciences of the Czech Republic

DOCUMENT TYPE: Journal

LANGUAGE: English

AB The acid liability of electron-rich N-benzylanilines has been exploited in a linker for the traceless solid-phase synthesis of benzimidazoles, 2-aminobenzimidazoles, quinoxalinones and tetrahydroquinoxalines. The target compd. precursors were assembled on a solid-phase support derivatized with ether a benzylamine or a benzhydrylamine linker. Exposure to an acidic reagent caused cleavage of the C(benzyl)-N(aniline) bond, releasing the product with only a hydrogen atom on the descending nitrogen. The Encore technique for directed sorting on SynPhase **Lanterns** has been developed and applied to combinatorial synthesis of generic drug discovery libraries.

REFERENCE COUNT: 55 THERE ARE 55 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L76 ANSWER 5 OF 33 HCAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 2001:729247 HCAPLUS

DOCUMENT NUMBER: 136:102617

TITLE: Fully automated parallel oligonucleotide synthesizer

AUTHOR(S): Lebl, Michal; Burger, Christine; Ellman, Brett; Heiner, David; Ibrahim, Georges; Jones, Aaron; Nibbe, Mark; Thompson, Jaylynn; Mudra, Petr; Pokorny, Vit; Poncar, Pavel; Zenisek, Karel

CORPORATE SOURCE: Spyder Instruments Inc., San Diego, CA, 92121, USA

SOURCE: Collection of Czechoslovak Chemical Communications (2001), 66(8), 1299-1314  
CODEN: CCCCCA; ISSN: 0010-0765

PUBLISHER: Institute of Organic Chemistry and Biochemistry, Academy of Sciences of the Czech Republic

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Design and construction of automated synthesizers using the tilted plate centrifugation technol. is described. Wash solns. and reagents common to all synthesized species are delivered automatically through a 96-channel distributor connected to a **gear** pump through two four-port selector valves. Building blocks and other specific reagents are delivered automatically through banks of solenoid valves, positioned over the individual wells of the microtiter plate. These instruments have the following capabilities: Parallel solid-phase oligonucleotide synthesis in the wells of polypropylene microtiter plates, which are slightly tilted

down towards the center of rotation, thus generating a pocket in each well, in which the **solid support** is collected during centrifugation, while the liq. is expelled from the wells. Eight microtiter plates are processed simultaneously, providing thus a synthesizer with a capacity of 768 parallel syntheses. The instruments are capable of unattended continuous operation, providing thus a capacity of over two millions 20-mer oligonucleotides in a year.

REFERENCE COUNT: 22 THERE ARE 22 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L76 ANSWER 6 OF 33 HCAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 2001:329492 HCAPLUS

DOCUMENT NUMBER: 135:88553

TITLE: Impedometric herbicide chemosensors based on molecularly imprinted polymers

AUTHOR(S): Panasyuk-Delaney, T.; Mirsky, V. M.; Ulbricht, M.; Wolfbeis, O. S.

CORPORATE SOURCE: Institute of Analytical Chemistry, Chemo- and Bio-sensors, University of Regensburg, Regensburg, D-93040, Germany

SOURCE: Analytica Chimica Acta (2001), 435(1), 157-162  
CODEN: ACACAM; ISSN: 0003-2670

PUBLISHER: Elsevier Science B.V.

DOCUMENT TYPE: Journal

LANGUAGE: English

AB The technique of **grafting** polymn. has been used for prepn. of thin films of molecularly imprinting polymers on the surface of polypropylene membranes and on hydrophobized gold electrodes. The herbicide desmetryn was used as a template. The **solid supports** used were hydrophobic, while the polymer was hydrophilic. The adsorbed layer of benzophenone, irradiated by UV-light, initiated a radical polymn. near the surface. Polymer films were characterized by weighing, contact angle measurements and impedance spectroscopy. The electrodes coated with the molecularly imprinted polymers displayed fairly specific binding of desmetryn, as detected by the decrease in the capacitance of the electrode. Only small capacitive effects were obsd. on addn. of terbumeton or atrazine, while metribuzin displayed capacitance decrease similar to desmetryn.

REFERENCE COUNT: 30 THERE ARE 30 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L76 ANSWER 7 OF 33 HCAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 2000:863404 HCAPLUS

DOCUMENT NUMBER: 134:192991

TITLE: **Grafted** supports in solid-phase synthesis

AUTHOR(S): Rasoul, Firas; Ercole, Francesca; Pham, Yen; Bui, Chinh T.; Wu, Zemin; James, Susan N.; Trainor, Robert W.; Wickham, Geoffrey; Maeji, N. Joe

CORPORATE SOURCE: Mimotopes Pty Ltd., Clayton, 3168, Australia

SOURCE: Biopolymers (2000), 55(3), 207-216

CODEN: BIPMAA; ISSN: 0006-3525

PUBLISHER: John Wiley & Sons, Inc.

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 134:192991

AB The authors are interested in the development of a "pellicular" type of **solid support** where a more mobile polymer is **grafted** to rigid plastics. Compared to low cross-linked microporous beads that dominate the field, this approach allows great flexibility of design, as plastics are available as sheets, films, or

threads, or can be molded into any shape, as required. Many different polymers or copolymers can be **grafted** onto any particular shape to give a wide choice of options in the physicochem. characteristics of the actual **solid support**. As an example of such a **solid support**, we report on polystyrene-**grafted** polypropylene in a particular shape that we have called "**Lanterns**". Its synthesis characteristics are compared to the commonly available low cross-linked polystyrene resins. As well, the handling advantages of these types of supports in multiple synthesis are highlighted.

REFERENCE COUNT: 20 THERE ARE 20 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L76 ANSWER 8 OF 33 HCAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 2000:833969 HCAPLUS

DOCUMENT NUMBER: 134:86220

TITLE: Efficient solid-phase synthesis of quinazoline-2-thioxo-4-ones with SynPhase **lanterns**

AUTHOR(S): Makino, Shingo; Suzuki, Nobuyasu; Nakanishi, Eiji; Tsuji, Takashi

CORPORATE SOURCE: Pharmaceutical Research Laboratories, Ajinomoto Co., Inc., Kawasaki, 210-8681, Japan

SOURCE: Tetrahedron Letters (2000), 41(43), 8333-8337  
CODEN: TELEAY; ISSN: 0040-4039

PUBLISHER: Elsevier Science Ltd.

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 134:86220

AB The efficient solid-phase synthesis of diverse 2-thioxoquinazolin-4-ones using SynPhase **lanterns** as **solid supports** is reported. Although target compds. were obtained only with low purity using Wang resin, **lanterns** derivatized with long-chain hydroxymethyl phenoxy linkers successfully gave products with high purity. Furthermore, subsequent reactions of 2-thioxoquinazolin-4-ones with various types of halides gave S-alkylated or S-arylated products with high purity, showing the usefulness of this chem. for synthesizing diverse 2-thioxoquinazolin-4-ones libraries.

REFERENCE COUNT: 12 THERE ARE 12 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L76 ANSWER 9 OF 33 HCAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 2000:688291 HCAPLUS

DOCUMENT NUMBER: 133:267243

TITLE: Catalytic processes for the controlled polymerization of free radically (co)polymerizable monomers and functional polymeric systems prepared thereby

INVENTOR(S): Matyjaszewski, Krzysztof; Gaynor, Scott G.; Paik, Hyun-jong; Pintauer, Tomislav; Pyun, Jeff; Qiu, Jian; Teodorescu, Mircea; Xia, Jianhui; Zhang, Xuan

PATENT ASSIGNEE(S): Carnegie Mellon University, USA

SOURCE: PCT Int. Appl., 200 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000056795	A1	20000928	WO 2000-US7905	20000323

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR,  
 CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU,  
 ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU,  
 LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE,  
 SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW,  
 AM, AZ, BY, KG, KZ, MD, RU, TJ, TM  
 RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE,  
 DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF,  
 CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG  
 EP 1171496 A1 20020116 EP 2000-918372 20000323  
 R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,  
 IE, SI, LT, LV, FI, RO

PRIORITY APPLN. INFO.:

US 1999-125809P P 19990323  
 US 1999-142980P P 19990712  
 WO 2000-US7905 W 20000323

AB Further improvements have been made in processes for controlled polymn. of free radically (co)polymerizable monomers mediated by a transition metal complex participating in a redox reaction which involves transfer of a radically transferable atom or group to and from an initiator or dormant polymer and the growing active polymer chain ends. Two improvements involve the choice of counterion in the transition metal complex. In one improvement the transition metal is held in close conjunction with a **solid support** through interaction with a counterion directly attached to the support. This cognition also allows for improvements in catalyst utilization including catalyst recovery and recycle. In another improvement, particularly suitable for controlled polymn. of certain monomers with an expanded range of transition metals, the function of counterion and ligand in the development of the transition metal based catalyst is superseded by use of salt contg. a sol. org. counterion. These and other process improvements have been employed to prep. and extended range of novel polymeric materials and novel processes for the prepn. of functional polymers including a novel catalytic Atom Transfer Coupling Reaction.

IT 9003-20-7P, Polyvinyl acetate 28431-95-0P, Carbon tetrachloride-vinyl acetate telomer 49627-92-1P  
 60256-96-4P 297757-25-6P 297757-26-7P  
 297757-27-8P 297757-28-9P 297757-29-0P

RL: IMF (Industrial manufacture); PREP (Preparation)  
 (catalytic processes for the controlled polymn. of free radically (co)polymerizable monomers and functional polymeric systems prepd. thereby)

RN 9003-20-7 HCAPLUS

CN Acetic acid ethenyl ester, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 108-05-4

CMF C4 H6 O2

AcO-CH=CH<sub>2</sub>

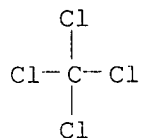
RN 28431-95-0 HCAPLUS

CN Acetic acid ethenyl ester, telomer with tetrachloromethane (9CI) (CA INDEX NAME)

CM 1

CRN 56-23-5

CMF C Cl4

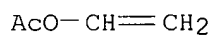


CM 2

CRN 9003-20-7  
 CMF (C4 H6 O2)x  
 CCI PMS

CM 3

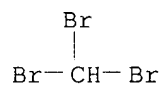
CRN 108-05-4  
 CMF C4 H6 O2



RN 49627-92-1 HCAPLUS  
 CN Acetic acid ethenyl ester, telomer with tribromomethane (9CI) (CA INDEX NAME)

CM 1

CRN 75-25-2  
 CMF C H Br3

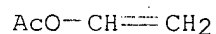


CM 2

CRN 9003-20-7  
 CMF (C4 H6 O2)x  
 CCI PMS

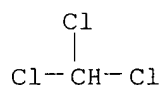
CM 3

CRN 108-05-4  
 CMF C4 H6 O2



RN 60256-96-4 HCAPLUS  
 CN Acetic acid ethenyl ester, telomer with trichloromethane (9CI) (CA INDEX NAME)

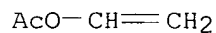
CM 1

CRN 67-66-3  
CMF C H Cl3

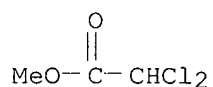
CM 2

CRN 9003-20-7  
CMF (C4 H6 O2)x  
CCI PMS

CM 3

CRN 108-05-4  
CMF C4 H6 O2RN 297757-25-6 HCAPLUS  
CN Acetic acid, dichloro-, methyl ester, telomer with ethenyl acetate (9CI)  
(CA INDEX NAME)

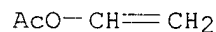
CM 1

CRN 116-54-1  
CMF C3 H4 Cl2 O2

CM 2

CRN 9003-20-7  
CMF (C4 H6 O2)x  
CCI PMS

CM 3

CRN 108-05-4  
CMF C4 H6 O2

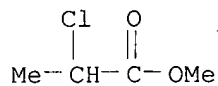
RN 297757-26-7 HCAPLUS



CN Propanoic acid, 2-chloro-, methyl ester, telomer with ethenyl acetate  
(9CI) (CA INDEX NAME)

CM 1

CRN 17639-93-9  
CMF C4 H7 Cl O2

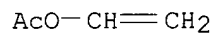


CM 2

CRN 9003-20-7  
CMF (C4 H6 O2)x  
CCI PMS

CM 3

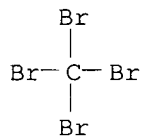
CRN 108-05-4  
CMF C4 H6 O2



RN 297757-27-8 HCAPLUS  
CN Acetic acid ethenyl ester, telomer with tetrabromomethane (9CI) (CA INDEX NAME)

CM 1

CRN 558-13-4  
CMF C Br4

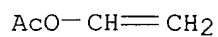


CM 2

CRN 9003-20-7  
CMF (C4 H6 O2)x  
CCI PMS

CM 3

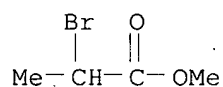
CRN 108-05-4  
CMF C4 H6 O2



RN 297757-28-9 HCAPLUS  
 CN Propanoic acid, 2-bromo-, methyl ester, telomer with ethenyl acetate (9CI)  
 (CA INDEX NAME)

CM 1

CRN 5445-17-0  
 CMF C4 H7 Br O2

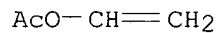


CM 2

CRN 9003-20-7  
 CMF (C4 H6 O2)x  
 CCI PMS

CM 3

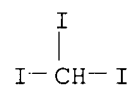
CRN 108-05-4  
 CMF C4 H6 O2



RN 297757-29-0 HCAPLUS  
 CN Acetic acid ethenyl ester, telomer with triiodomethane (9CI) (CA INDEX NAME)

CM 1

CRN 75-47-8  
 CMF C H I3



CM 2

CRN 9003-20-7  
 CMF (C4 H6 O2)x  
 CCI PMS

CM 3

CRN 108-05-4  
 CMF C4 H6 O2

AcO-CH=CH<sub>2</sub>

REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L76 ANSWER 10 OF 33 HCAPLUS COPYRIGHT 2002 ACS  
 ACCESSION NUMBER: 2000:314888 HCAPLUS  
 DOCUMENT NUMBER: 132:302060  
 TITLE: Apparatus and method for depositing low k dielectric materials in device fabrication  
 INVENTOR(S): Kao, Yeh-Jen; Chang, Fong M.; Majewski, Robert B.; Parks, John; Wanamaker, David; Wang, Yen-Kun  
 PATENT ASSIGNEE(S): Applied Materials, Inc., USA  
 SOURCE: PCT Int. Appl., 18 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000026435	A1	20000511	WO 1999-US25631	19991101
W: JP, KR				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
US 6176198	B1	20010123	US 1998-184934	19981102

PRIORITY APPLN. INFO.: US 1998-184934 A 19981102

AB The invention provides a deposition system and methods of depositing materials onto substrates. In one aspect, a **modular** processing chamber (10) is provided which includes a chamber body (12, 16, 18) defining a processing region (14). The chamber body includes a removable gas feed through (34), an elec. feed through (22), a gas distribution assembly (56) mounted on a chamber lid (54) and a microwave applicator (72) for generating reactive gases remote from the processing region.

REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L76 ANSWER 11 OF 33 HCAPLUS COPYRIGHT 2002 ACS  
 ACCESSION NUMBER: 2000:8209 HCAPLUS  
 DOCUMENT NUMBER: 132:177423  
 TITLE: Influence of the microenvironment on the activity of enzymes immobilized on Teflon membranes **grafted** by .gamma.-radiation  
 AUTHOR(S): Mohy Eldin, M. S.; Portaccio, M.; Diano, N.; Rossi, S.; Bencivenga, U.; D'Uva, A.; Canciglia, P.; Gaeta, F. S.; Mita, D. G.  
 CORPORATE SOURCE: International Institute of Genetics and Biophysics of CNR, Naples, Italy  
 SOURCE: Journal of Molecular Catalysis B: Enzymatic (1999), 7(5-6), 251-261  
 CODEN: JMCEF8; ISSN: 1381-1177  
 PUBLISHER: Elsevier Science B.V.  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English

AB The effect of the microenvironment and immobilization method on the activity of immobilized .beta.-galactosidase was investigated.

Immobilization was done on Teflon membranes **grafted** with different acrylic monomers by .gamma.-radiation and activated by two different coupling agents through the functional groups of the **grafted** monomers. 2-Hydroxyethyl methacrylate (HEMA) and methacrylic acid (MAA) were **grafted** on the membrane, and 1,6-hexamethylenediamine (HMDA) was used as a spacer. Glutaraldehyde or cyanuric chloride were used as coupling agents to bind the enzyme to the membrane. Four different catalytic membranes were obtained using the same **solid support**. Direct comparison between the isothermal behavior of the biocatalyst in its free and immobilized form was carried out. In particular the dependence of the isothermal activity on the temp. and pH was studied and the kinetic parameters detd. The influence of the microenvironment on the obsd. activity of the four membranes was evidenced and discussed. The way of improving the yield of these catalytic membranes is discussed also.

IT 9002-84-ODP, Teflon, reaction products with .beta.-galactosidase and 1,6-hexamethylenediamine and 2-hydroxyethyl methacrylate or methacrylic acid

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); PRP (Properties); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation)

(membranes; influence of the microenvironment on the activity of enzymes immobilized on Teflon membranes **grafted** by .gamma.-radiation)

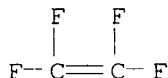
RN 9002-84-0 HCAPLUS

CN Ethene, tetrafluoro-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 116-14-3

CMF C2 F4



REFERENCE COUNT: 38 THERE ARE 38 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L76 ANSWER 12 OF 33 HCAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 1999:297241 HCAPLUS

DOCUMENT NUMBER: 130:339311

TITLE: UV-filtering textile support, process for its manufacture and its uses

INVENTOR(S): Barthelemy, Alain

PATENT ASSIGNEE(S): DHJ International, Fr.

SOURCE: Eur. Pat. Appl., 20 pp.

CODEN: EPXXDW

DOCUMENT TYPE: Patent

LANGUAGE: French

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 913518	A1	19990506	EP 1998-402696	19981029
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				

FR 2770542 A1 19990507 FR 1997-13716 19971031  
FR 2770542 B1 20010323

PRIORITY APPLN. INFO.: FR 1997-13716 A 19971031  
OTHER SOURCE(S): MARPAT 130:339311

AB The UV-protecting material comprises at least one layer of fabric of natural or synthetic fibers contg. dispersed through its thickness one or more UV absorbers selected from org. compds., mineral pigments, or dyes. The org. compds. are benzotriazoles, triazines, benzophenones, tetramethylpiperidines, benzoates, substituted acrylonitriles, oxanilides, cinnamates, malonates, Ni complexes; the pigments are TiO<sub>2</sub> and Fe oxides. The textile material is linen, cotton, glass fiber, viscose, polyester, polyamide and their blends. The material has at least one protective layer of a polymer or mixt. of polymers selected from polyurethane, acrylic, or vinyl polymers, a surfactant based on paraffin, silicone, or mixts., a crosslinking agent, e.g., melamine, blocked isocyanate, aziridine, and one or more pigments. The material is fabricated by depositing protective layers onto the fabric, subjecting to thermal treatment at 90-150.degree., calendering at 8.5 - 400 kg/cm at 80-200.degree., followed by polymn. [thermal crosslinking] at 150-200.degree.; decorative motifs are printed on the fabric and layers. The material is suitable for protection of furniture and artwork, as awning, and for protective gear, e.g., umbrellas, hats, etc. Thus, an aq. dispersion of Et acrylate, Bu acrylate, and Me methacrylate 45%, 7 parts of hexamethylol melamine resin, 5 parts acrylic acid, 0.5 parts ammonia, and Solartex Cut (benzotriazole based UV absorber, Ciba Geigy) was used as protective layer on a polyester fabric. The coated fabric was dried at 100-150.degree., calendered in a roll at 100.degree., 40 kg/cm, at a rate of 20 m/min; polymn. was carried out by transporting through a heated Bruckner tunnel at 180.degree. at a rate of 15 m/min. The material showed a UV filtration index [250-370 nm] higher than 95%.

REFERENCE COUNT: 10 THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L76 ANSWER 13 OF 33 HCAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 1998:509231 HCAPLUS

DOCUMENT NUMBER: 129:144843

TITLE: Methods for radiation **grafting** to polymeric **surfaces**

INVENTOR(S): Zhao, Chanfeng; Lillig, John E.; Neeper, Robert; Hudson, Gordon W.; Czarnik, Anthony W.; Parandoosh, Zahra; David, Gary S.; Xiao, Xiao-Yi

PATENT ASSIGNEE(S): IRORI, USA

SOURCE: PCT Int. Appl., 81 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 20

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9831732	A2	19980723	WO 1998-US1295	19980122
WO 9831732	A3	19981203		
W:	AL, AM, AT, AU, AZ, BA, BB, BG, BR, BU, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, GW, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
RW:	GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM,			

GA, GN, ML, MR, NE, SN, TD, TG

US 6329139	B1	20011211	US 1997-912998	19970811
US 6136274	A	20001024	US 1997-958254	19971007
AU 9862479	A1	19980807	AU 1998-62479	19980122
EP 959985	A2	19991201	EP 1998-904656	19980122

R: CH, DE, FR, GB, IT, LI

PRIORITY APPLN. INFO.:

US 1997-788594	A	19970122
US 1997-857800	A	19970122
US 1997-826253	A	19970327
US 1997-912998	A	19970811
US 1997-958254	A	19971007
US 1995-473660	A2	19950607
US 1995-480147	A2	19950607
US 1995-480196	A2	19950607
US 1995-484486	A2	19950607
US 1995-484504	A2	19950607
US 1995-538387	A2	19951003
US 1995-567746	A2	19951205
US 1996-639813	B2	19960402
WO 1996-US6145	A2	19960425
US 1996-633410	A2	19960610
US 1996-669252	A2	19960624
US 1996-711426	A2	19960905
US 1996-709435	A2	19960906
US 1996-723423	A2	19960930
WO 1996-US15999	A2	19961003
US 1996-726703	B2	19961007
US 1996-743984	A2	19961028
US 1996-741685	B2	19961031
WO 1998-US1295	W	19980122

AB Methods for irradiation-induced **graft** polymers of monomers, such as styrenes, onto fluoropolymers are provided. The methods, which involve either the use of acids, preferably mineral acids, or creating a rough surface on the fluoropolymer, provide higher levels of **grafting** of the copolymer than **grafting** in the absence of the acid or of the rough surface on the fluoropolymer. Also provided are **grafted** copolymers produced by the methods. Methods for increasing the performance of solid phase assays, such as scintillation proximity assays, are also provided. The methodol. of the invention is useful in the prodn. of supports for high-throughput screening protocols in drug discovery and for combinatorial chem.

IT **109211-02-1DP**, Styrene-tetrafluoroethylene **graft** copolymer, reaction products with N-(hydroxymethyl)phthalimide  
**197895-58-2DP**, Ethylene-styrene-tetrafluoroethylene **graft** copolymer, reaction products with N-(hydroxymethyl)phthalimide  
**197895-58-2P**, Ethylene-styrene-tetrafluoroethylene **graft** copolymer

RL: BUU (Biological use, unclassified); DEV (Device component use); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
 (radiation **grafting** to polymeric surfaces for supports for screening and combinatorial chem.)

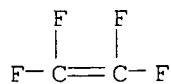
RN **109211-02-1** HCAPLUS

CN Benzene, ethenyl-, polymer with tetrafluoroethene, graft (9CI) (CA INDEX NAME)

CM 1

CRN 116-14-3

CMF C2 F4



CM 2

CRN 100-42-5

CMF C8 H8



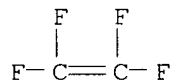
RN 197895-58-2 HCAPLUS

CN Benzene, ethenyl-, polymer with ethene and tetrafluoroethene, graft (9CI)  
(CA INDEX NAME)

CM 1

CRN 116-14-3

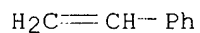
CMF C2 F4



CM 2

CRN 100-42-5

CMF C8 H8



CM 3

CRN 74-85-1

CMF C2 H4



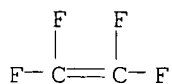
RN 197895-58-2 HCAPLUS

CN Benzene, ethenyl-, polymer with ethene and tetrafluoroethene, graft (9CI)  
(CA INDEX NAME)

CM 1

CRN 116-14-3

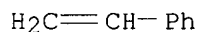
CMF C2 F4



CM 2

CRN 100-42-5

CMF C8 H8



CM 3

CRN 74-85-1

CMF C2 H4

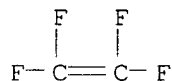


IT 9002-84-0D, Polytetrafluoroethylene, polymer **grafts**  
 25038-71-5D, Ethylene-tetrafluoroethylene copolymer, polymer **grafts**  
 RL: BUU (Biological use, unclassified); DEV (Device component use); THU  
 (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (radiation **grafting** to polymeric **surfaces** for  
 supports for screening and combinatorial chem.)  
 RN 9002-84-0 HCAPLUS  
 CN Ethene, tetrafluoro-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 116-14-3

CMF C2 F4



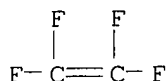
RN 25038-71-5 HCAPLUS  
 CN Ethene, tetrafluoro-, polymer with ethene (9CI) (CA INDEX NAME)

CM 1

CRN 116-14-3

CMF C2 F4





CM 2

CRN 74-35-1

CMF C2 H4

 $\text{H}_2\text{C}=\text{CH}_2$ 

L76 ANSWER 14 OF 33 HCAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 1998:79681 HCAPLUS

DOCUMENT NUMBER: 128:128430

TITLE: Method for producing crosslinkable polypropylenes and their use

INVENTOR(S): Raetzsch, Manfred; Hesse, Achim; Bucka, Hartmut; Ivanchev, Sergej; Heikin, Saul; Mesh, Alla; Pukschanski, Moisej

PATENT ASSIGNEE(S): PCD Polymere G.m.b.H., Austria

SOURCE: Ger. Offen., 8 pp.

CODEN: GWXXBX

DOCUMENT TYPE: Patent

LANGUAGE: German

FAMILY ACC. NUM. COUNT: 2

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 19629427	A1	19980129	DE 1996-19629427	19960722
DE 19629427	C2	20010215		
EP 821018	A2	19980128	EP 1997-111905	19970712
EP 821018	A3	19980930		

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, FI

US 6136926 A 20001024 US 1997-898592 19970722

PRIORITY APPLN. INFO.: DE 1996-19629427 A 19960722

DE 1996-19629429 A 19960722

AB Fine particles of polypropylene, or their mixts. with .ltoreq.40% fine particles of additives, are treated with hydrolyzable ethylenically unsatd. organosilanes or a mixt. of hydrolyzable ethylenically unsatd. organosilanes 60-99.9, hydrolyzable satd. organosilanes 0.1-40, and other ethylenically unsatd. compds. 0.1-40 wt.% in 0.1-40% inert diluent and subjected to ionizing radiation (0.01-1.0 megarad) at 20-155.degree. to induce **grafting**, after which the still thermoplastic polymer compn. is shaped. Thus, 200 g polypropylene powder (particle diam. 50-250 .mu.m) was impregnated in vacuo with 9.5 g  $\text{CH}_2:\text{CHSi}(\text{OEt})_3$ , heated to 130.degree., and .gamma.-irradiated to 0.1 megarad to achieve 4.3% **grafting**. A 100-.mu.m film from the modified polymer was cured by hydrolysis at 80.degree. in the presence of 2-5%  $\text{Bu}_2\text{Sn}$  dilaurate for 20-30 h to show 73.2% gel content.

IT 66149-02-8P, Ethylene-propylene-triethoxyvinylsilane copolymer

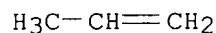
RL: IMF (Industrial manufacture); PREP (Preparation)

(prepn. of cocrosslinked polypropylene blends)

RN 66149-02-8 HCAPLUS  
 CN Silane, ethenyltriethoxy-, polymer with ethene and 1-propene (9CI) (CA INDEX NAME)

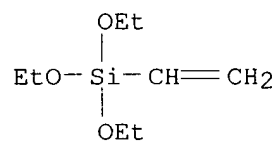
CM 1

CRN 115-07-1  
 CMF C3 H6



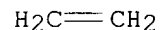
CM 2

CRN 78-08-0  
 CMF C8 H18 O3 Si



CM 3

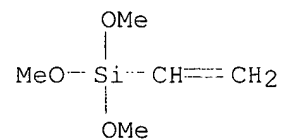
CRN 74-85-1  
 CMF C2 H4



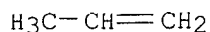
IT 107240-65-3P, Propylene-trimethoxyvinylsilane **graft**  
 copolymer 127499-45-0P, Propylene-triethoxyvinylsilane  
**graft** copolymer  
 RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT  
 (Reactant or reagent)  
 (prepn. of crosslinkable polypropylenes)  
 RN 107240-65-3 HCAPLUS  
 CN Silane, ethenyltrimethoxy-, polymer with 1-propene, graft (9CI) (CA INDEX NAME)

CM 1

CRN 2768-02-7  
 CMF C5 H12 O3 Si

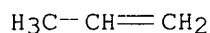


CM 2

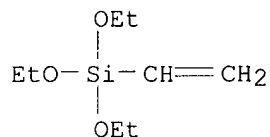
CRN 115-07-1  
CMF C3 H6

RN 127499-45-0 HCAPLUS  
CN Silane, ethenyltriethoxy-, polymer with 1-propene, graft (9CI) (CA INDEX NAME)

CM 1

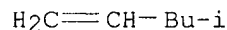
CRN 115-07-1  
CMF C3 H6

CM 2

CRN 78-08-0  
CMF C8 H18 O3 Si

IT 25068-26-2, Poly(4-methyl-1-pentene)  
RL: MOA (Modifier or additive use); USES (Uses)  
(prepn. of crosslinkable polypropylenes by radiochem. **grafting**  
in presence of)  
RN 25068-26-2 HCAPLUS  
CN ~~1-Pentene, 4-methyl-, homopolymer, (9CI)~~ (CA INDEX NAME)

CM 1

CRN 691-37-2  
CMF C6 H12

L76 ANSWER 15 OF 33 HCAPLUS COPYRIGHT 2002 ACS  
ACCESSION NUMBER: 1997:341993 HCAPLUS  
DOCUMENT NUMBER: 127:35751  
TITLE: Departiculation of polymer syrups  
INVENTOR(S): Doyle, Thomas R.  
PATENT ASSIGNEE(S): Novacor Chemicals (Internatioanal) SA, Switz.

SOURCE: U.S., 12 pp.  
 CODEN: USXXAM  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5629383	A	19970513	US 1996-644457	19960510

AB A stable partially polyimd. syrup comprising dispersed rubber-like composite particles in a resin phase may be converted to a metastable syrup in which the rubber-like composite and resin phases are co-continuous by subjecting the stable syrup to high shear under pressure. Thus, styrene contg. 8% medium cis-polybutadiene rubber and tert-Bu peroxyacetate was polyimd., and a syrup discharged through a gear pump at 4-60 rpm formed a gel with turbidity, while at 90-110 rpm, it was a gel with little turbidity.

L76 ANSWER 16 OF 33 HCAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 1996:298833 HCAPLUS

DOCUMENT NUMBER: 125:11576

TITLE: Radiational **graft** polymerization of hexenes on polystyrene

AUTHOR(S): Aliguliyev, R. Mamedogli; Efendiyev, E. Age Mirzaogli; Portiynski, A. Efimovich; Gadjiyev, R. Zulfuogli

CORPORATE SOURCE: AZNIIOLEFIN, Baku, Azerbaijan

SOURCE: Iranian Polymer Journal (1996), 5(1), 50-55

CODEN: IPJOFF; ISSN: 1026-1265

PUBLISHER: Polymer Research Center of Iran

DOCUMENT TYPE: Journal

LANGUAGE: English

AB The **graft** polymn. of isomeric hexenes on polystyrene was carried out in order to create an elec. insulation material with improved operation characteristics. Reactions were carried out with .gamma.-rays and accelerated electron beams. The mech., thermal, structural, and dielec. characteristics of modified polystyrene were investigated. **Grafting** was most effective with 4-methyl-1-pentene. The method allowed improvement of dielec. loss, heat resistance, and thermal stability of polystyrene.

IT 177408-87-6P

RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation) (dielec. and thermal properties of radiochem. **graft**-polyimd. hexenes-polystyrene copolymers)

RN 177408-87-6 HCAPLUS

CN Benzene, ethenyl-, polymer with ~~4-methyl-1-pentene~~, **graft** (9CI) (CA INDEX NAME)

CM 1

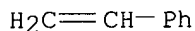
CRN 691-37-2

CMF C6 H12

H<sub>2</sub>C=CH-Bu-i

CM 2

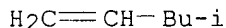
CRN 100-42-5  
CMF C8 H8



L76 ANSWER 17 OF 33 HCAPLUS COPYRIGHT 2002 ACS  
 ACCESSION NUMBER: 1994:437071 HCAPLUS  
 DOCUMENT NUMBER: 121:37071  
 TITLE: Plasma deposition of vinyl monomers onto  
 poly(4-methyl-1-pentene)/poly(dimethyl siloxane) blend  
 membrane for enrichment of oxygen from air  
 AUTHOR(S): Lai, J. Y.; Shih, C. Y.; Lin, F. C.  
 CORPORATE SOURCE: Dep. Chem. Eng., Chung Yuan Univ., Chung Li, 32023,  
 Taiwan  
 SOURCE: Polymer Journal (Tokyo, Japan) (1994), 26(6), 665-74  
 CODEN: POLJB8; ISSN: 0032-3896  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 AB An oxygen-enriched membrane with improved O<sub>2</sub>-to-N<sub>2</sub> selectivity was prepd.  
 by plasma deposition vinyl monomers onto poly(4-methyl-1-  
 pentene) (TPX)/poly(dimethylsiloxane) (PDMS) blend membrane. The effects  
 of deposition time, supply power, and kinds of monomers on the gas sepn.  
 performance of membranes were studied. The monomers used in this study  
 included Me methacrylate, vinyl acetate, 2-hydroxyethyl methacrylate, and  
 Et acrylate. The structure of the modified membrane was confirmed by  
 FT-IR, SEM, and x-ray diffraction. Pressure -normalized O<sub>2</sub> flux and  
 O<sub>2</sub>-to-N<sub>2</sub> selectivity through a TPX/PDMS blend membrane plasma coated with  
 vinyl acetate (PVAc-p-TPX/PDMS) at 10W-20 min, were 0.81 .times. 10<sup>-6</sup> cm<sup>3</sup>  
 cm<sup>-2</sup>-s-1-cmHg-1 and 5.16, resp. O<sub>2</sub>-to-N<sub>2</sub> selectivity and  
 pressure-normalized O<sub>2</sub> flux were higher than that of the pure TPX  
 membrane.  
 IT 25068-26-2, TPX-MX 002  
 RL: USES (Uses)  
 (di-Me siloxane blends, membranes from, plasma deposition of vinyl  
 monomers onto, for enrichment of oxygen from air)  
 RN 25068-26-2 HCAPLUS  
 CN ~~1-Pentene, 4-methyl-, homopolymer~~ (9CI) (CA INDEX NAME)

CM 1

CRN 691-37-2  
CMF C6 H12



L76 ANSWER 18 OF 33 HCAPLUS COPYRIGHT 2002 ACS  
 ACCESSION NUMBER: 1994:193553 HCAPLUS  
 DOCUMENT NUMBER: 120:193553  
 TITLE: Oxygen and nitrogen-treated polymer substrates with  
 good hydrophilic properties  
 INVENTOR(S): Ito, Tetsuo; Ninomya, Toshuki; Yasuda, Kenji  
 PATENT ASSIGNEE(S): Japan Synthetic Rubber Co Ltd, Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 11 pp.  
 CODEN: JKXXAF

DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	JP 05179034	A2	19930720	JP 1991-337947	19911128
AB	The title substrates is prepd. by plasma polymn. O and/or N-contg. unsatd. compd. or unsatd. compd. mixed with O and/or N on the surface of a polymer substrate and dicontinuous coating with inorg. oxide on the surface. Plasma polymg. of allyl alc. mixed with Ar on the surface of PMMA substrate and sputter coating Si oxide at 0.05 torr and 80 W gave samples showing water contact angle 66.degree. initially and 24.degree. after treatment.				
IT	691-37-2D, <del>4-Methyl-1-pentene</del> , graft copolymer with contact lens 153882-43-0				
	RL: USES (Uses) (sputtering coating inorg. oxide on, hydrophilic)				
RN	691-37-2 HCAPLUS				
CN	1-Pentene, 4-methyl- (8CI, 9CI) (CA INDEX NAME)				

$\text{H}_2\text{C}=\text{CH}-\text{Bu}-\text{i}$

RN 153882-43-0 HCAPLUS  
 CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with 2-propen-1-ol, graft (9CI) (CA INDEX NAME)

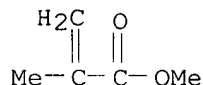
CM 1

CRN 107-18-6  
 CMF C3 H6 O

$\text{H}_2\text{C}=\text{CH}-\text{CH}_2-\text{OH}$

CM 2

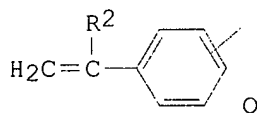
CRN 80-62-6  
 CMF C5 H8 O2



L76 ANSWER 19 OF 33 HCAPLUS COPYRIGHT 2002 ACS  
 ACCESSION NUMBER: 1993:474266 HCAPLUS  
 DOCUMENT NUMBER: 119:74266  
 TITLE: Siloxane-based thermoplastic sliding materials and antisoiling materials  
 INVENTOR(S): Kurata, Takashi; Ijuin, Noriaki; Kawamura, Yoshiaki; Kanya, Akira  
 PATENT ASSIGNEE(S): Japan Synthetic Rubber Co Ltd, Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 10 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 05025237	A2	19930202	JP 1991-290391	19911011
JP 3168638	B2	20010521		
PRIORITY APPLN. INFO.: GI			JP 1991-42172	A1 19910215



AB Title materials, showing low friction and good soiling resistance and impact strength, comprise polymers with av. particle diam. .ltoreq.5000 .ANG. obtained by **grafting** 20-95 parts vinyl monomers on 5-80 parts siloxanes modified by **grafting**-crosslinking agents contg. H2C:CRC6H4 (R = H, C1-6 alkyl) and alkoxy-silyl groups. A modified siloxane (av. particle diam. 2800 .ANG.) prep'd. from 98.5 parts octamethylcyclotetrasiloxane and 1.5 parts (MeO)2SiMeR1 (R1 = p-vinylphenyl) was **grafted** with acrylonitrile and styrene at **grafting** degree 96% to give a resin which was mixed (50 parts) with 50 parts JSR-AS 230 and injection molded at 230.degree. to give moldings with Izod impact strength 28 kg.cm/cm, kinetic friction coeff. 0.15, and good resistance to soiling by oil-based marking inks.

L76 ANSWER 20 OF 33 HCAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 1988:168649 HCAPLUS  
 DOCUMENT NUMBER: 108:168649  
 TITLE: Process for producing high-impact styrene resin by continuous bulk polymerization  
 INVENTOR(S): Morita, Tsuyoshi; Enomoto, Masaru; Shimazu, Kyotaro  
 PATENT ASSIGNEE(S): Dainippon Ink Chemical Industry Co., Japan  
 SOURCE: Eur. Pat. Appl., 10 pp.  
 CODEN: EPXXDW  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 2  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 254304	A2	19880127	EP 1987-110640	19870722
EP 254304	A3	19891123		
EP 254304	B1	19940921		
R: CH, DE, FR, GB, IT, LI				
JP 63030515	A2	19880209	JP 1986-173699	19860725
JP 07025856	B4	19950322		
JP 63037110	A2	19880217	JP 1986-180763	19860731
JP 07025857	B4	19950322		
CA 1293091	A1	19911210	CA 1987-542813	19870723

## PRIORITY APPLN. INFO.:

JP 1986-173699

19860725

JP 1986-180763

19860731

AB A high-impact styrene (I) resin is manufd. by continuous bulk polymn. of I monomer in the presence of 3-15 wt. parts rubber in tubular polymn. reactors connected in series having static mixers and coupled with a recycle line through which part of the initial-stage polymer soln. is recycled to the starting material feed line. Thus, 95 parts I and 5 parts Diene NF 35A were continuously bulk polymd. at 155.degree. in tubular reactors connected in series having static mixers and attached to a recycle line and having a **gear** pump in the center of the assembly. The polymer soln. was heated to 230.degree. under a reduced pressure to remove the volatile components, the residue was melted, kneaded, and pelletized to give a high-impact I resin showing **grafting** ratio 2.0, Izod impact strength 7.5 kg-cm/cm, and surface gloss 85, compared with 1.3, 5.5, and 81, resp., for a similar high-impact I resin prepd. in complete-mixing 2-tank reactors wherein the initial-stage polymer soln. was continuously withdrawn from one reactor and polymd. in a 2nd tank reactor at 155.degree..

L76 ANSWER 21 OF 33 HCAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 1988:168442 HCAPLUS

DOCUMENT NUMBER: 108:168442

TITLE: Synthesis of polystyrene-supported polyethylene glycol and study of its property in peptide synthesis  
 AUTHOR(S): Jiang, Ying; Liang, Xun; Chen, Weizhu; He, Binglin  
 CORPORATE SOURCE: Dep. Chem., Nankai Univ., Tianjin, Peop. Rep. China  
 SOURCE: Huaxue Xuebao (1987), 45(11), 1112-18  
 CODEN: HHHPA4; ISSN: 0567-7351

DOCUMENT TYPE: Journal

LANGUAGE: Chinese

AB **Graft** polymn. of PEG on chloromethylated divinylbenzene-styrene copolymer (I) in the presence of NaOH or Na naphthalene afforded a polymer support for solid-state synthesis of peptides. The effects of reaction time, temp., and NaOH concn. on PEG **grafting** level were detd. The reaction rate of amino acids and yield of peptides on PEG support was slightly higher than those for I support.

L76 ANSWER 22 OF 33 HCAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 1987:214537 HCAPLUS

DOCUMENT NUMBER: 106:214537

TITLE: Radiation **grafting** of hydrophilic monomers onto poly(4-methylpentene-1). I **Grafting** of acrylic acid

AUTHOR(S): Soebianto, Yanti S.; Yoshii, F.; Makuuchi, K.; Ishigaki, I.

CORPORATE SOURCE: Takasaki Radiat. Chem. Res. Establ., Japan At. Energy Res. Inst., Takasaki, 370-12, Japan

SOURCE: Angewandte Makromolekulare Chemie (1987), 149, 87-99  
 CODEN: ANMCBO; ISSN: 0003-3146

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Radiation **grafting** of acrylic acid (I) [79-10-7] onto poly(4-methylpentene-1) (II) [25068-26-2] with different crystallinity was investigated under various conditions. Free radicals formed by pre-irradn. of II in vacuum were more stable than those in the presence of air and might initiate the **grafting** reaction when in contact with I. **Grafting** yields increased with increasing preirradn. dose, **grafting** temp., and concn. of I. Lower cryst. II (24%) showed a higher initial **grafting** rate compared with higher cryst. one. The distribution of **grafting** was obsd. by



X-ray microanalyzer. The **grafting** reaction proceeded gradually with time from the surface of the film to the inner part. In high cryst. II (34%), the **grafting** distribution in the final stage depended on the film thickness, while the lower cryst. II, it was homogeneous regardless the film thickness.

IT 25068-26-2, Poly(4-methylpentene-1)  
 RL: USES (Uses)  
 (radiation **grafting** of acrylic acid on)  
 RN 25068-26-2 HCAPLUS  
 CN ~~1-Pentene, 4-methyl-, homopolymer~~ (9CI) (CA INDEX NAME)

CM 1

CRN 691-37-2  
 CMF C6 H12

H<sub>2</sub>C=CH-Bu-i

L76 ANSWER 23 OF 33 HCAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 1986:19936 HCAPLUS

DOCUMENT NUMBER: 104:19936

TITLE: Radiation-induced emulsion polymerization of vinyl acetate in a pilot plant reactor. I. Recycle flow reactor

AUTHOR(S): Challa, R. R.; Drew, J. H.; Stannett, V. T.; Stahel, E. P.

CORPORATE SOURCE: Chem. Eng. Dep., North Carolina State Univ., Raleigh, NC, 27695-7905, USA

SOURCE: Journal of Applied Polymer Science (1985), 30(11), 4261-71

CODEN: JAPNAB; ISSN: 0021-8995

DOCUMENT TYPE: Journal

LANGUAGE: English

AB A no. of successful radiation polymns. of vinyl acetate. [108-05-4] in emulsion were carried out in a **modular** stainless steel flow pilot plant. In a recycle mode, the system was utilized for extremely accurate kinetic measurements and exptl. verification of model restrictions such as plug flow, lack of post irradiation effects and differential reactor behavior. Exptl. conditions were explored to minimize contaminant, primarily O<sub>2</sub>, inhibition, and the tendency for this formulation, essentially an adhesive, to build up on the reactor walls. Industrial scaleup of such a prototype system appears attractive.

L76 ANSWER 24 OF 33 HCAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 1982:492936 HCAPLUS

DOCUMENT NUMBER: 97:92936

TITLE: Crosslinking of polystyrene during its radiation-chemical modification

AUTHOR(S): Efendiev, E. A.

CORPORATE SOURCE: USSR

SOURCE: Radiats. Fiz.-Khim. Polim. Mater. Uglevodorov (1981), 18-22. Editor(s): Rustamov, V. R. Izd. Elm: Baku, USSR.

CODEN: 48CNAN

DOCUMENT TYPE: Conference

LANGUAGE: Russian

AB Modification of polystyrene (I) [9003-53-6] by electron beam- or .gamma.

ray-induced **grafting** with 4-methyl-1-pentene [691-37-2] was accompanied by crosslinking. The crosslinking proceeded via the **grafted** I intermediates. The yield of **grafted** I, and the yield of the gel fraction, were higher in .gamma. ray-induced reaction than in that initiated by electron beams.

IT 691-37-2

RL: RCT (Reactant)

(polymn. of, **graft** ~~radiochem.~~ on polystyrene, crosslinking in)

RN: 691-37-2 HCAPLUS

CN: ~~1-Pentene, 4-methyl-~~ (8CI, 9CI) (CA INDEX NAME)H<sub>2</sub>C=CH-Bu-i

L76 ANSWER 25 OF 33 HCAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 1980:551341 HCAPLUS

DOCUMENT NUMBER: 93:151341

TITLE: Plastic **gears**

PATENT ASSIGNEE(S): Teijin Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 7 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 55044101	A2	19800328	JP 1978-114030	19780919
JP 61029427	B4	19860707		

AB Soundless plastic **gears** were prep'd. by molding blends of poly(butylene terephthalate) (I) [24968-12-5] contg. vinyl compd.-**grafted** acrylic rubber and optionally contg. a polyether polyester and a phosphoric acid ester. Thus, 100 parts Bu acrylate was polyimd. with 0.5 part allyl methacrylate. The above elastomer (60 parts) was **grafted** with Me methacrylate 24, styrene 8, acrylonitrile 8, and triallyl isocyanurate 0.25 part to give a **graft** polymer (II) [70799-67-6]. A blend contg. 100 parts I and 40 arts II was injection molded to give a soundless **gear**, whereas a **gear** molded from I only was not soundless.

L76 ANSWER 26 OF 33 HCAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 1978:406596 HCAPLUS

DOCUMENT NUMBER: 89:6596

TITLE: Gas chromatographic analysis of products formed by radiofrequency plasma discharges

AUTHOR(S): Castello, Gianrico; Canepa, Piero; Nicchia, Mario

CORPORATE SOURCE: Ist. Chim. Ind., Univ. Genova, Genoa, Italy

SOURCE: Ann. Chim. (Rome) (1977), 67(3-4), 149-59

CODEN: ANCRAI; ISSN: 0003-4592

DOCUMENT TYPE: Journal

LANGUAGE: English

AB A system is described which allows control of discharge parameters (frequency, time, energy, pressure) and gas chromatog. anal. of the products formed during polymn. by radiofrequency plasma discharges. By using a thermal cond. detector, approx. 10<sup>-9</sup> mol of hydrocarbon products can be measured. This corresponds to a partial pressure of .apprx.5

.times. 10-3 torr in the reaction vessel. With a flame ionization detector, the sensitivity increases to .apprx.10-11 mol. The system was constructed using a **modular** concept, thus allowing wide variation in the discharge and anal. conditions and in the configuration for closed system and flow discharge.

L76 ANSWER 27 OF 33 HCAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 1977:552703 HCAPLUS

DOCUMENT NUMBER: 87:152703

TITLE: Modification of polymer **surfaces** by cationic **grafting**

AUTHOR(S): Vidal, A.; Donnet, J. B.; Kennedy, J. P.

CORPORATE SOURCE: Cent. Rech. Phys.-Chim. Surf. Solides, Mulhouse, Fr.

SOURCE: J. Polym. Sci., Polym. Lett. Ed. (1977), 15(10), 585-8

CODEN: JPYBAN

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Olefins can be **grafted** on the PVC [9002-86-2] **surface** by a cationic polymn. in the presence of organoaluminum compds. as initiators. The mechanism of **graft** polymn. of olefins on PVC **surface** involves an initiation by a macrocation formed from the polymer, followed by an **electrophilic** attack on the monomer. **Graft** polymn. of styrene [100-42-5] and isobutylene [115-11-7] on PVC surface was examd. in the presence of Et<sub>2</sub>AlCl [96-10-6] as initiator. The **graft** copolymers were characterized by scanning electron microscopy and x-ray diffraction.

IT 9002-86-2

RL: USES (Uses)

(**grafting** of, with olefins, **surface** structure in)

RN 9002-86-2 HCAPLUS

CN Ethene, chloro-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 75-01-4

CMF C2 H3 C1

H<sub>2</sub>C=CH-Cl

L76 ANSWER 28 OF 33 HCAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 1976:447865 HCAPLUS

DOCUMENT NUMBER: 85:47865

TITLE: **Solid support** material for chromatographic use

INVENTOR(S): Kosaka, Yujiro; Uemura, Masaru; Hashimoto, Tsutomu; Fukano, Kazuyuki

PATENT ASSIGNEE(S): Toyo Soda Mfg. Co., Ltd., Japan

SOURCE: Ger. Offen., 24 pp.

CODEN: GWXXBX

DOCUMENT TYPE: Patent

LANGUAGE: German

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 2503999	A1	19760429	DE 1975-2503999	19750131

DE 2503999	C2	19820225		
JP 51044992	A2	19760416	JP 1974-118374	19741015
JP 52047355	B4	19771201		
FR 2287935	A1	19760514	FR 1975-1936	19750122
FR 2287935	B1	19801212		
US 4045353	A	19770830	US 1975-543800	19750124
GB 1467785	A	19770323	GB 1975-3965	19750129
CA 1046451	A1	19790116	CA 1975-225694	19750425

## PRIORITY APPLN. INFO.:

JP 1974-118374 19741015

AB The title supports, with high sepg. capacity, good strength and heat resistance, and low swelling, are prepd. by radiochem. polymn. of monomers adsorbed on microporous inorg. substrates. Thus, 8 g styrene is adsorbed on 10 g silica gel (sp. surface 350 m<sup>2</sup>/g, av. diam. 20-5 .mu.) and irradiated 20 hr with 105 R/hr gamma rays at room temp. in vacuo. Extn. of homopolymer with C<sub>6</sub>H<sub>6</sub> leaves **graft** polymer equiv. to 25% of the silica gel. A 30 cm .times. 9.4 mm diam. column packed with this product gives an excellent sepn. of C<sub>6</sub>H<sub>5</sub>, C<sub>10</sub>H<sub>8</sub>, and anthracene in MeOH at 2.5 ml/min and 15 kg/cm<sup>2</sup>; while ungrafted silica gel gives no sepn.

L76 ANSWER 29 OF 33 HCAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 1976:11517 HCAPLUS

DOCUMENT NUMBER: 84:11517

TITLE: Passivating semiconductor surfaces

INVENTOR(S): Horowitz, Carl; Dichter, Michael

PATENT ASSIGNEE(S): General Instrument Corp., USA

SOURCE: U.S., 10 pp.

CODEN: USXXAM

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

## PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	-----
US 3916073	A	19751028	US 1974-449955	19740311

AB A passivating coating is **grafted** onto the **surface** of a semiconductor device by transesterification and/or hydroperoxide addn. to improve the elec. characteristics of the device. The **grafted** coating increases the breakdown voltage and sharpness of the knee characteristic of the device, while exhibiting excellent adherence to the surface, high thermal stability, and a resistance to cracking. Elec. active monomers are **grafted** to the semiconductor **surface** to preclude or neutralize the formation of low-resistance accumulation and inversion layers. For n-type semiconductors, the polymerizable coating contains an **electrophilic** monomer (a polyallyl ester, in particular, diallyl benzenedicarboxylate), and for a p-type semiconductor, a nucleophilic monomer (a N-contg. vinyl ester, in particular, polyallyl cyanidine). Preferably, mixts. of monomers are used. Optional components of the polymerizable coatings include polyfunctional vinyl P compd. monomers to impart flame-resistance (for the n-type coatings only), a vinyl arom. monomer to permit low-temp. curing of the coating and provide enhanced rigidity, C black to impart opacity and light stability, solvents, fillers, free radical polymn. initiators, and polymn. inhibitors. Coatings for p-type semiconductors may contain both nucleophilic and **electrophilic** monomers to decrease their cracking tendency, without impairing their elec. function. To improve the ease in handling the polymerizable coating, the elec. active monomers are present both as the monomer and as the prepolymer or partially polyemd. compd. The coatings were applied to Si chips and tested.

IT 25067-59-8 25988-85-6 26951-05-3

57584-17-5 57635-91-3 57635-93-5

57635-96-8

RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses)

(coatings, **grafted** onto **surface** of silicon semiconductor devices)

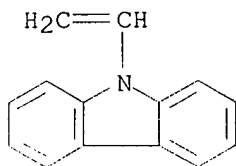
RN 25067-59-8 HCAPLUS

CN 9H-Carbazole, 9-ethenyl-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 1484-13-5

CMF C14 H11 N



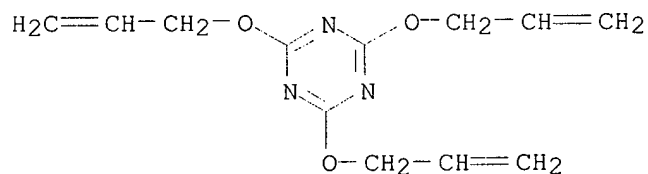
RN 25988-85-6 HCAPLUS

CN 1,3,5-Triazine, 2,4,6-tris(2-propenyloxy)-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 101-37-1

CMF C12 H15 N3 O3



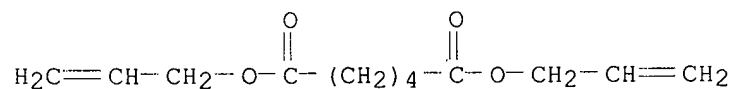
RN 26951-05-3 HCAPLUS

CN Hexanedioic acid, di-2-propenyl ester, polymer with ethenylbenzene (9CI) (CA INDEX NAME)

CM 1

CRN 2998-04-1

CMF C12 H18 O4



CM 2

CRN 100-42-5

CMF C8 H8

 $\text{H}_2\text{C}=\text{CH}-\text{Ph}$ 

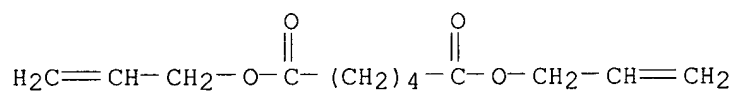
RN 57584-17-5 HCAPLUS

CN Hexanedioic acid, di-2-propenyl ester, polymer with cyclohexyl  
2-methyl-2-propenoate and ethenylbenzene (9CI) (CA INDEX NAME)

CM 1

CRN 2998-04-1

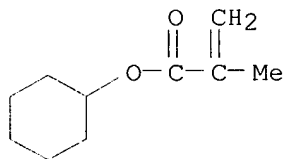
CMF C12 H18 O4



CM 2

CRN 101-43-9

CMF C10 H16 O2



CM 3

CRN 100-42-5

CMF C8 H8

 $\text{H}_2\text{C}=\text{CH}-\text{Ph}$ 

RN 57635-91-3 HCAPLUS

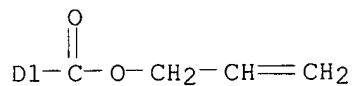
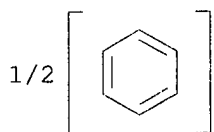
CN Benzenedicarboxylic acid, di-2-propenyl ester, polymer with tri-2-propenyl  
phosphate (9CI) (CA INDEX NAME)

CM 1

CRN 55845-02-8

CMF C14 H14 O4

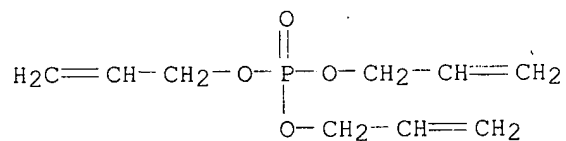
CCI IDS



CM 2

CRN 1623-19-4

CMF C9 H15 O4 P



RN 57635-93-5 HCAPLUS

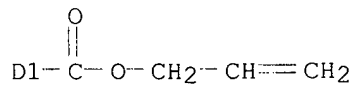
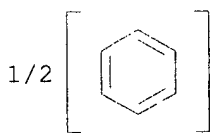
CN Benzenedicarboxylic acid, di-2-propenyl ester, polymer with  
2,4,6-tris(2-propenyloxy)-1,3,5-triazine (9CI) (CA INDEX NAME)

CM 1

CRN 55845-02-8

CMF C14 H14 O4

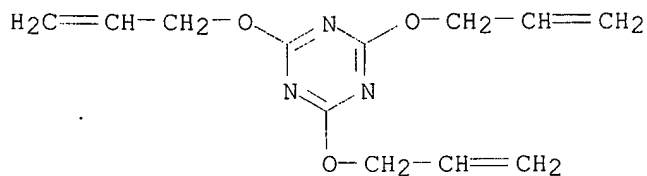
CCI IDS



CM 2

CRN 101-37-1

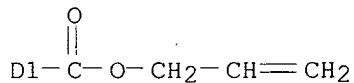
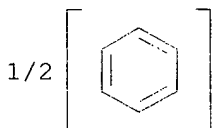
CMF C12 H15 N3 O3



RN 57635-96-8 HCAPLUS  
 CN Benzenedicarboxylic acid, di-2-propenyl ester, polymer with  
 bis(2-chloroethyl) ethenylphosphonate (9CI) (CA INDEX NAME)

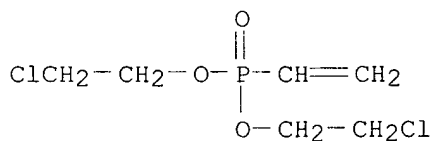
CM 1

CRN 55845-02-8  
 CMF C14 H14 O4  
 CCI IDS



CM 2

CRN 115-98-0  
 CMF C6 H11 Cl2 O3 P



L76 ANSWER 30 OF 33 HCAPLUS COPYRIGHT 2002 ACS  
 ACCESSION NUMBER: 1972:489347 HCAPLUS  
 DOCUMENT NUMBER: 77:89347  
 TITLE: Polyimide prepolymer  
 INVENTOR(S): Hand, John Davis; Whitehouse, Wendell Gaylon  
 PATENT ASSIGNEE(S): General Electric Co.  
 SOURCE: Ger. Offen., 21 pp.  
 CODEN: GWXXBX  
 DOCUMENT TYPE: Patent  
 LANGUAGE: German  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:



PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 2159326		19720608	US 1970-94528	19701202

PRIORITY APPLN. INFO.:  
 AB The polyimide prepolymer maleic anhydride-methylenedianiline copolymer (I) [28630-21-9] of good mech. and elec. properties and of high thermal stability was prepd. I was useful for molding powders, **gears**, ratchets, bearings, packings, valve seats, films, coatings, fibers etc. and for elec. applications. Thus, 39.5 g methylenedianiline (II) in 100 ml Me<sub>2</sub>CO was added within 40 min to a refluxing soln. of 41 g maleic anhydride in 200 ml Me<sub>2</sub>CO and 1-2 ml H<sub>2</sub>O. Ni acetate 0.4 NET<sub>3</sub> 7, and Ac<sub>2</sub>O 60 g were added, and the mixt. refluxed 2 hr to give a difunctional imide. II was added to a refluxing soln. of the imide in Me<sub>2</sub>CO up to 2.5:1 imide-II molar ratio, refluxed 30 min, azodiisobutyronitrile added, and refluxed 15 min to give I contg. 0.20 double bonds/100 g, 1.3% amine, and 2.5% volatile substances. A 25:75% graphite-I compn. was formed under pressure to give a product of flexural strength 703 kg/cm<sup>2</sup> and bending modulus 49,210 kg/cm<sup>2</sup> as compared with 703 kg/cm<sup>2</sup> and 56,240 kg/cm<sup>2</sup> of a product contg. a polyimide prepolymer prepd. by heating 20 min at 160.deg..

L76 ANSWER 31 OF 33 HCAPLUS COPYRIGHT 2002 ACS  
 ACCESSION NUMBER: 1969:471711 HCAPLUS  
 DOCUMENT NUMBER: 71:71711  
 TITLE: Thermoplastic rubber  
 INVENTOR(S): Luijk, Pieter; Van Gelderen, Evert; Schipper, Gerrinus P.  
 PATENT ASSIGNEE(S): Shell International Research Maatschappij N. V.  
 SOURCE: Brit., 15 pp.  
 CODEN: BRXXAA  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
GB 1158980		19690723	GB	19680704

AB Thermoplastic rubbers, with improved strength and useful in the prepn. of films, fibers, foams, laminates, profiles, tubes, insulation, and shock absorbers, by molding and extrusion, are prepd. Thus, a polyisoprene (I) mass was heated at 230.degree. in the transportation zone of a continuous mixer. After the plasticized I had passed the blister zone, it came into the mixing zone in which a maleic anhydride (II) soln. was injected and intimately mixed with the hot I which was subjected to mastication using **gear** shaped mixing elements. The temp. of the I decreased gradually from 230.degree. to 190.degree. in the mixing zone for a mean residence time of 7 min. The **grafted** I was discharged from the extrusion orifice and subsequently cooled gradually from 190.degree. to room temp. Four compns. were prepd. by mixing a I-II adduct with ZnO, stearic acid and ISAF carbon black in a Brabender Plastograph as follows (I-II adduct (phr.), ZnO (phr.), stearic acid (phr.), and carbon black (phr.) given): 100, 5, 0, 0; 100, 5, 3, 0; 100, 0, 0, 48; 100, 5, 3, 48. Slabs, having a thickness of 2.5 mm., were prepd. by heating these compns. for 5 min. at 150.degree.. The addn. of only ZnO or carbon black to the I-II adduct did not convert it into a rubber material having satisfactory strength properties. When using ZnO together with stearic acid, the adduct was converted into a rubber product having the same strength properties as a vulcanizate, although it was not vulcanized. The use of

carbon black together with ZnO and stearic acid resulted in a compn. having improved strength properties. Similarly used were Zn stearate, Ca stearate, Mg stearate and Pb stearate or the corresponding oxides together with stearic acid. Stearamide demonstrated a synergistic effect on the strength properties of the products when used in amts. <20 parts/100 resin.

L76 ANSWER 32 OF 33 HCAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 1964:493221 HCAPLUS  
DOCUMENT NUMBER: 61:93221  
ORIGINAL REFERENCE NO.: 61:16273d-g  
TITLE: High-strength **graft** copolymers of  
1,2-polybutadiene and styrene having good electrical  
properties  
INVENTOR(S): Safford, Moyer M.; Myers, Robert L.  
PATENT ASSIGNEE(S): General Electric Co.  
SOURCE: 4 pp.  
DOCUMENT TYPE: Patent  
LANGUAGE: Unavailable  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 3151184		19640929	US	19560327

AB A mixt. of (A) polybutadiene gum prepd. by the bulk polymerization of butadiene with an alkali metal, the gum contg. .gtoreq.30% 1,2-polybutadiene and having an intrinsic viscosity .gtoreq.1, and (B) a monoaryl-substituted vinylidene compd., e.g. styrene, and (C) 0.5-6.0% based on the wt. of A and B of di-.alpha.-cumyl peroxide was heated at 60-150.degree., to **graft** polymerize the styrene to the polybutadiene, and the resulting copolymer was cured at 150.degree. up to the decompn. point of the copolymer. 1,2-Polybutadiene (I) was prepd. by the method of Marvel, et al. (CA 40, 68814) and had an intrinsic viscosity of 6.0 in C6H6. Phenyl-.beta.-naphthylamine (0.1%) was added as an antioxidant. The product contained .gtoreq.60% 1,2-polybutadiene. **Graft** copolymers were prepd. by reaction of I with styrene which had been washed with dil. aq. NaOH, dried, and distd. I was dissolved in styrene and 3% di-.alpha.-cumyl peroxide was added. The solns. were heated at 100.degree. for 3 hrs., and then for 2 hrs. at 150.degree. to give rods of polymer. The thermoplastic flow of polystyrene and the above copolymers under a load of 30 lb./in.2 at 150.degree. for samples contg. 100, 99, 95, and 90% styrene was 100, 27, 16, and 11%, resp. The copolymers can be used as hot-strength film or tapes, for elec. parts, e.g. spark plug caps, for **gears**, etc., which are subjected to high temp., for laminates, and for containers for hot liquids.

L76 ANSWER 33 OF 33 HCAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 1964:462258 HCAPLUS  
DOCUMENT NUMBER: 61:62258  
ORIGINAL REFERENCE NO.: 61:10841a-c  
TITLE: High-impact-strength polystyrene  
INVENTOR(S): Fryling, Charles F.  
PATENT ASSIGNEE(S): Koppers Co., Inc.  
SOURCE: 4 pp.  
DOCUMENT TYPE: Patent  
LANGUAGE: Unavailable  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE

US 3144420 19640811 US 19611218

AB Rubber-styrene **graft** copolymers of optimum internal cross-linking, suitably imbedded in a polystyrene (I) matrix, are produced in high yield by polymerizing a mixt. prepd. by intimately mixing 2 prepolymer solns., e.g. rubber in styrene and I in styrene. In an example, I (mol. wt. .apprx.180,000) 30 in styrene 70 and styrene-butadiene synthetic rubber 16 in styrene 84 parts were intimately mixed by stirring and then passing twice through a **gear** pump. tert-Bu perbenzoate 0.07 and (tert-Bu)2O2 0.02 in styrene 1 part were added with stirring. The mixed soln. was added to a kettle contg. H2O 200, poly(vinyl alc.) 0.14, a suspending agent, and NaCl 0.16 part, heated to 110.degree., held at 110.degree. for 4 hrs., heated to 140.degree., and held for 4 hrs., and the beads formed recovered, washed, dried, and passed through an extruder. The product had tensile strength (ASTM N638-60T) 4620 lb./in.2, modulus (ASTM D638-60T) 304 lb./in. .times. 10-3, % elongation (ASTM N63860T) 52, and Izod impact (D256-56) 4.9 in.-lb.

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